

**Audience Needs Assessment Research Project  
of Kindergarten through Twelfth Grade Teachers  
in Collier County, Florida  
July 2024**

**Prepared for  
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## **BACKGROUND**

In 2024 Sarah Falkowski, Education Coordinator for the Rookery Bay National Estuarine Research Reserve (RBNERR) hired Tabitha Stadler, Executive Director of the non-profit organization Environmental Protection in the Caribbean (EPIC), to update the market analysis (MA) of kindergarten through college field-based environmental education programs and an audience needs assessment (NA) focused on kindergarten through twelfth grade teachers in Collier County, Florida, that had previously been conducted in 2014.

Back in 2014, RBNERR in partnership with the Friends of Rookery Bay (FORB) and with funding from a Bay-Watershed Education and Training Program grant from the National Oceanic and Atmospheric Administration (NOAA) hired a consultant to conduct a MA and NA with the same focus and the consultant was also Ms. Stadler, formerly with GeoBlue Coastal Management Solutions. The results of this research successfully guided RBNERR education programs between 2014-2024.

RBNERR is a partnership program between the Florida Department of Environmental Protection and NOAA and is part of a national system of 30 NERRS throughout the United States of America that all have hands-on, field-based science, technology, engineering and math (STEM) focused education programs for students and teachers. NOAA requires NERR education programs to periodically conduct MA and NA research.

RBNERR is also one of approximately a dozen outdoor environmental field trip locations and organizations that were formerly part of the Collier County Public School System (CCPS) Field Trip Specialist Program (FTSP). In recent years, this program was renamed Field Sciences Experiences Program (FSEP) and significantly broadened to include programs that are not entirely field based. The FSEP is an effort coordinated by the CCPS Science Coordinators to facilitate the participation of students at multiple grade levels in science programming and field trips provided by a range of community organizations.

This document includes the results of the NA analysis including comparisons to the 2014 data.

## **RESEARCH GOALS AND PURPOSE**

According to NOAA's K-12 Estuarine Education Program (KEEP) framework an NA "measure(s) the specific needs of target audiences. They assess target audience knowledge, skills, and attitudes relevant to proposed services. This is similar to and may overlap some audience-based information gleaned from a thorough market analysis. Needs assessments can also provide insights to how audiences want your programs to be packaged (i.e. format, costs, distance traveled, duration, etc.)" (NOAA KEEP, 2008). The research goals for RBNERR's MA and NA included:

- Increase understanding of informal/non-formal hands-on, field-based, environmental education providers, with a specific focus on those providing estuarine, coastal or

ocean education, serving kindergarten through college students and teachers in Collier County, Florida,

- Increase shared understanding of the value and market niche of RBNERR's and other environmental education programs,
- Assess the needs, interests and motivations of teachers for participating in field-based environmental programs, and when possible, for specifically attending RBNERR programs, and,
- Apply information gained to support program improvements and new program development at RBNERR, and throughout Collier County, Florida.

In order to clarify research goals and practical benefits a kick-off meeting with the RBNERR Education Team members was conducted on March 21, 2024 and that input was incorporated into the research.

## **METHODOLOGY**

A survey was drafted by EPIC staff, then reviewed and approved by RBNERR staff and populated in the online survey program called Survey Monkey. The survey was disseminated to Collier County Public School (CCPS) teachers by their Science Coordinator and it included 37 questions, a decrease of 4 questions from the previous survey in 2014. The CCPS Science Coordinator sent the survey to his contacts at all of the CCPS schools, excluding charter schools, and they were instructed to pass the survey along to all of the teachers. According to the CCPS website, there are approximately 3,200 teachers in the CCPS system, an increase of 100 teachers from the previous NA. The survey remained open between May 13 through June 2 for approximately three weeks and two email reminders were sent to CCPS teachers during that time. This survey was sent a month later than the previous survey and garnered less responses, likely due to the end of the school year timing, which is a busy time for teachers.

In addition, specific emails were sent to the 30 private schools in Collier County using two different approaches: 1) EPIC staff provided emails and directly contacted three private schools that they had worked with before, 2) EPIC staff found email addresses for private school teachers and administrators online and followed up with phone calls to confirm who should receive the emailed survey request. In total, 102 additional emails were sent to the private school audience directly from EPIC with a personal message. This is a reduction of approximately 98 from the previous NA. The exact number of private school teachers in Collier County is unknown. Based on the Private School Review website ([www.privateschoolreview.com](http://www.privateschoolreview.com)) there are 8,040 students at the 30 private schools in Collier County that serve kindergarten through twelfth grade students. To estimate the response rate for the NA survey, the contractor used an average ratio of 1:20 teacher/student and then divided the total number of students by 20 to estimate then there would be approximately 447 private school teachers. Therefore, the total approximate number of public and private school teachers in Collier County is 3,647, up ~300 from the previous survey. The survey received 66 responses, 130 less than the previous effort, and based on the number of teachers the response rate was 2%, which

is 4% less than the previous survey, although this is an estimate since the exact number of teachers is unknown. This document represents the results of the NA.

## RESULTS

### GENDER

The majority of teachers, 83%, taking the survey were female while only 15% were Male and 2% preferred not to answer. In the previous survey 83% were female and 17% were male showing similar representation. One change to this survey was the wording of the question which previously had been “What is your gender?” and in this iteration was “What is the gender to which you identify?” The change in language is reflective of the increased societal sensitivity to the idea of multiple genders.

Q1 What is the gender to which you identify?

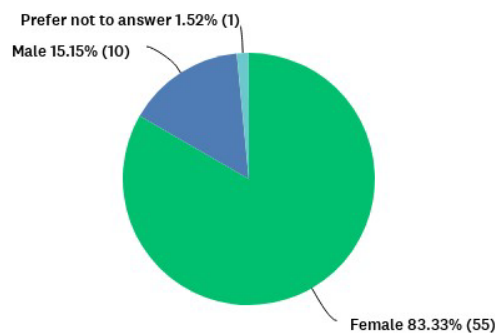


Figure 1: Gender Identification of Survey Participants

### HIGHEST DEGREE COMPLETED

Survey respondents educational levels included 52% having a Bachelor’s degree, 45% having a Master’s degree, and 3% having a Doctorate degree. Since a Bachelor’s degree is required to obtain a teaching certificate, this demonstrates that approximately half of respondents sought additional education. Compared to the previous NA, the number of respondents with a Master’s degree dropped slightly from 49% to 45% and the number of respondents with a Doctorate degree dropped slightly from 3% to 2%.

Q2 What is the highest degree you have completed?

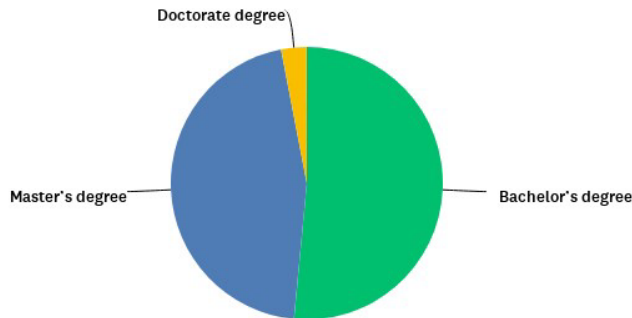


Figure 2: Highest Degree Completed

### AGE RANGE

The range of ages represented was fairly evenly divided with 9% between the ages of 18-29, 23% between the ages of 30-39, 18% between the ages of 40-49, 38% between the ages of 50-59, and 12% over 60 years of age.

Q3 What is your age?

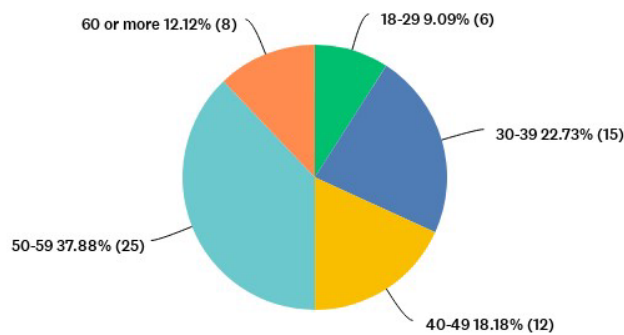


Figure 3: Age Ranges

A comparison of the age ranges of respondents from the 2014 survey to the current survey shows a greater number of older respondents in the 50 to over 60 age ranges,

~50% in the current study compared to 31% in the prior study, and a reduced number of respondents in the 18-49 year old ranges, 18% compared to 9%.

**Table 1: Comparison of Age Ranges**

Survey Age Range	Survey in 2014	Survey in 2024
18-29	9%	18%
30-39	23%	25%
40-49	18%	26%
50-59	38%	21%
>60	12%	10%

## ETHNICITY

The majority of respondents, 80% specified white as their ethnicity, with 19% specifying Hispanic or Latino, up from 9% during the previous survey, and one respondent specifying Black or African American as their ethnicity. Two respondents skipped this question. There was a comment stating “Biracial (Black and White)” indicating the potential for an additional category in future surveys. The racial composition for Collier County based on the 2022 U.S. census indicates that 89% are White, 7% are Black or African American, .5% are American Indian or Alaska Native, 2% are Asian Pacific Islander, and 29% are Hispanic or Latino. In the previous study 88.6% of respondents specified that they were White.

**Table 2: Ethnicity**

Q4 Please specify your ethnicity.

ANSWER CHOICES	RESPONSES
Asian or Pacific Islander	0.00% 0
American Indian or Alaska Native	0.00% 0
Black or African American	1.56% 1
Hispanic or Latino	18.75% 12
White	79.69% 51
<b>TOTAL</b>	<b>64</b>

## YEARS IN EDUCATION

The number of years working in education varied widely with nearly a quarter of respondents, 24%, choosing more than 26 years and 23% choosing six to ten years otherwise the other options garnered between 8% to 14% of responses. In the previous NA, the responses were more evenly divided with 11% - 22% in each category.



Q5 How many years have you been working in education?

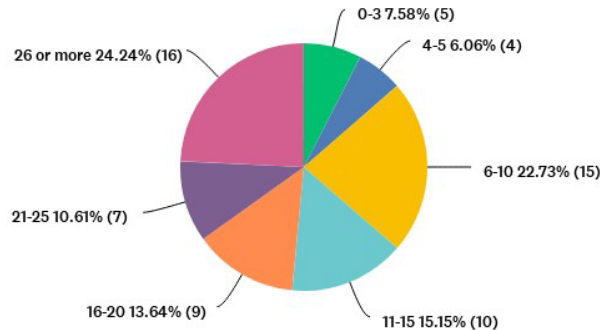


Figure 4: Years Working in Education

**ROLES WITHIN A SCHOOL**

The majority of respondents and approximately half, 56%, were public school teachers and zero public school administrators participated. Private school teachers comprised 29% of respondents, nearly one third, which is a good turnout for that audience. Additional roles were represented in smaller numbers with only public school administrators having zero representation. In the previous study there were 92.9% public school teachers, zero public school administrators, and 3.1% private school teachers. Other answers included Point of Contact for Science and Department Chair.

Table 3: Roles Within Schools

Q6 What are your main roles within your school or school system?

ANSWER CHOICES	RESPONSES	
Public School Teacher	56.06%	37
Public School Administrator	0.00%	0
Private School Teacher	28.79%	19
Private School Administrator	6.06%	4
Point-of-Contact for Science	3.03%	2
Department Chair	12.12%	8
Instructional Coach	7.58%	5
Other (please specify)	Responses 6.06%	4
Total Respondents: 66		

**TYPICAL COLLIER COUNTY PUBLIC SCHOOL GRADES BY SCHOOL TYPE**

The majority of public schools in Collier County, Florida are grouped by grade levels as follows:

- Elementary Schools – Kindergarten through fifth grade
- Middle Schools – Sixth grade through eighth grade
- High Schools – Ninth grade through twelfth grade

## GRADE LEVELS TAUGHT

Survey question seven asked “What grade level(s) do you currently teach?” and it garnered responses that covered all grade levels, which was a desired result. When utilizing the typical CCPS breakdown by school type (see above), the majority of respondents, 69 (177 in the previous survey, and also the majority), represented kindergarten through fifth grade, which are elementary school teachers. There are more elementary school teachers than there are other types because there are more students of that age and because elementary schools include six grade levels. The survey garnered 42 responses about teaching high school and 43 responses about teaching middle school. The previous survey had 84 responses about teaching high school and 34 about teaching middle school. More than one grade level was chosen by respondents.

Q7 What grade level(s) do you currently teach?

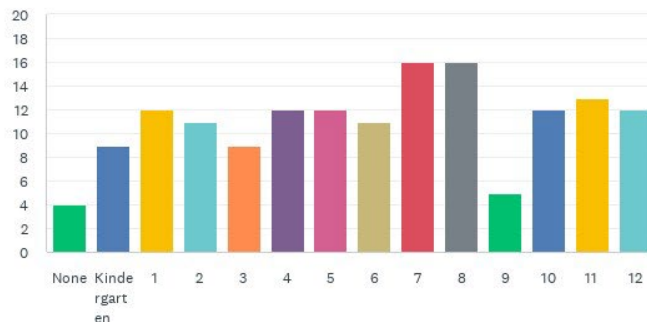


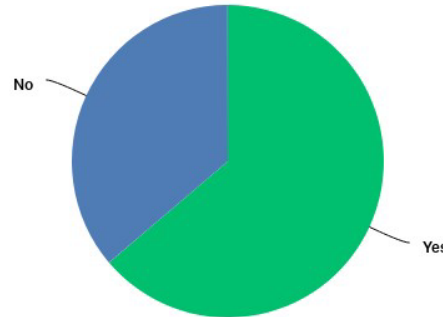
Figure 5: Grade Levels Currently Teaching

## TOPICAL FOCUS AREA

A little more than half of respondents, 64%, have a topical focus area that they teach, while 21% said they do not have a topical focus area, and 15% skipped the question. Elementary school teachers typically teach all subjects, while teachers at the middle and high school levels often specialize. A total of 39 responses were received when asked “What is it?” and those responses are listed below. In the previous study 44% said they have topical focus area, which is 20% less than in the current study.

Thirty of the 39 open-ended responses to this question identified topical focus areas that relate to science which is appropriate for this audience needs assessment since environmental education (EE) programs are the focus of this research. Twelve responses were non-science-focused or included a non-science focus in addition to a science focus. The responses were alphabetized and grouped.

Q8 Do you have a topical focus area that you teach about? If yes, what is it?



**Figure 6: Respondents With and Without a Teaching Focus Area**

**Table 4: Open-ended Responses to Survey Q8, Topical Focus Area Taught**

1.	AICE Marine Science, AP Environmental Science
2.	Art
3.	Art
4.	Biology / Anatomy
5.	Biology
6.	Chemistry/Biology
7.	Earth/Space Science
8.	Earth & Space Science
9.	Elementary Science
10.	Elementary Science
11.	High school history & government/middle school social studies & science
12.	Language Arts
13.	Language Arts, Science, Social Studies
14.	Life Science
15.	Life science
16.	Life Science
17.	Life Science
18.	Life Science (Biology, Ecology, intro Genetics)
19.	Marine Science
20.	Marine science
21.	Marine science
22.	Math
23.	Math
24.	Math
25.	Math

26.	Math/Science
27.	Physical Science
28.	Physical Science
29.	Physical Science
30.	Physical Science
31.	Physics
32.	Religion
33.	Science STEAM
34.	Science grades K-5
35.	Science
36.	Science
37.	Science
38.	Science & Engineering
39.	Spanish Language

## YEARS TEACHING ESTUARY, WATERSHED, AND OCEAN TOPICS

As demonstrated in the topical focus area question, many of the respondents teach science classes on a regular basis. The results of this survey question regarding their years teaching estuary, watershed, and ocean-related topics revealed that approximately one third or more have never taught these subjects. However, of those that have taught them, the length of time they have been teaching them varies, but a higher percentage have been teaching them for less than two years. This is an area where Rookery Bay or other providers could support additional training or exposure. Interestingly, the next highest response for those teaching them was more than 15 years. There is a higher likelihood that these respondents specifically know about Rookery Bay Reserve, have been on their field trips, and participated in the survey due to this familiarity.

**Table 5: Years Teaching Estuary, Watershed, and Ocean Related Topics**

Q9 How many years have you been teaching estuary, watershed, and ocean related topics?

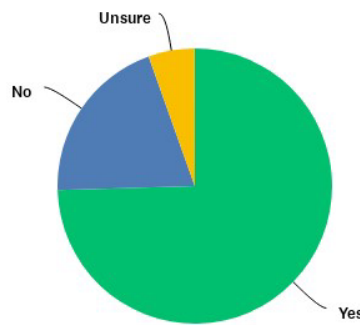
	NONE	LESS THAN 2 YEARS	2-3 YEARS	3-5 YEARS	5-7 YEARS	7-10 YEARS	10-15 YEARS	MORE THAN 15 YEARS	TOTAL
Estuaries	36.36% 24	16.67% 11	6.06% 4	6.06% 4	7.58% 5	9.09% 6	4.55% 3	13.64% 9	66
Watershed	43.55% 27	17.74% 11	3.23% 2	6.45% 4	4.84% 3	6.45% 4	6.45% 4	11.29% 7	62
Ocean	37.10% 23	17.74% 11	6.45% 4	4.84% 3	3.23% 2	11.29% 7	4.84% 3	14.52% 9	62

## PARTICIPATION IN OUTDOOR ENVIRONMENTAL EDUCATION FIELD TRIPS

The majority of respondents, 75% (down from 84% in the previous survey), have participated in outdoor, EE field trips, while 20% have not participated (compared to

16% in the previous survey), and 5% skipped the question. This demonstrates a bias in the type of respondents, but one that was expected in light of the methodology used to disseminate the survey which included emails to teachers sent by the CCPS Science Coordinator who oversees the Field Trip Specialist Program. A tally of the open-ended responses regarding the field trips that teachers had participated in revealed that 30 of the 66 answered, with several listing multiple field trip locations. The table below shows that the most often cited was Rookery Bay, which confirms survey bias meaning respondents who received the survey and also had been to Rookery Bay were more likely to complete the survey. In addition, it is overall more likely that those already interested in field based EE programs would be more likely to participate in a survey on the subject, whereas those with little interest in this subject-matter would not take the time to participate. Several other providers, besides Rookery Bay, that were included in the Market Analysis research were mentioned including Big Cypress Preserve (5), Corkscrew Swamp Sanctuary (4), Conservancy of Southwest Florida (4), Florida Gulf Coast University (FGCU) Vester Center (3), Naples Zoo (3), CREW (2), and FGCU Panther Posse (2). Tigertail Beach had three respondents which is interesting because it is managed by Collier County Parks and Recreation Department and does not directly offer EE programming. Therefore, an EE provider would have had to host them at this public site. The MA revealed that Audubon of the Western Everglades and Rookery Bay Reserve offers this type of field trip, but there may be others unless the teachers are guiding the field trip themselves.

Q10 Have you ever taken your students on an outdoor, environmental education field trip?



**Figure 7: Participation in Outdoor Environmental Field Trips**

**Table 6: Field Trip Locations and Number of Respondents**

# of Responses	Respondents Identified Field Trip Locations
1	Airboat Rides
1	Beach Cleanups
5	Big Cypress
1	Bird Rookery Swamp

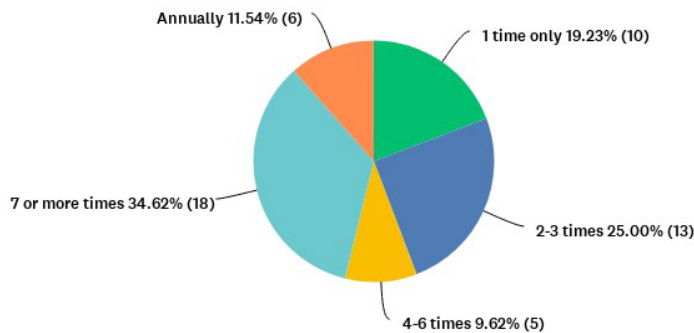
1	Calusa Nature Center
1	Clam Pass
1	Collier County Museum
4	Conservancy of SWFL field trips in elementary school, Survivors
4	Corkscrew
2	CREW
2	Ding Darling
2	FGCU Panther Posse
3	FGCU Vester Field station boat trips
1	Flint Pen Trail
2	Florida Aquarium
1	IMAG
1	In Colorado- wetlands
1	Key Largo Shark Camp
1	Manatee Park
1	Naples Botanical Garden
3	Naples Zoo
1	Not at my current school
1	Peace River Fossil Hunting
1	Recycling Plant
16	Rookery Bay Estuary Explorers/Survivors/Trawl
1	Sea World
3	Tigertail Beach
1	Useppa Island
1	Walking Trail
1	Water Treatment Plant

## FREQUENCY OF ATTENDING FIELD BASED EE PROGRAMS

The majority of respondents have participated in outdoor EE programs and 21% skipped the question, probably meaning they have not participated in any field trips. A high percentage of 35% said they participated in field trips more than seven times during their career, while 25% said they participated two to three times. This indicates that the majority of respondents are repeatedly taking their students on field trips programs. One comment received was “We just go annually to Roberts Ranch in Immokalee! I know it is not very environmental but helps me get my kids outdoors to talk about plants and sometimes animals they have.” Roberts Ranch is a Collier County Museum, but has outdoor space, and was not included in the field trip site Market Analysis. It’s relevant that even field trips that are not solely environmental in focus are sometimes opportunities for teachers to talk about environmental topics and perhaps

also issues. As mentioned in the 2014 research results, teachers that are repeat attenders on field trips are a promising audience for continued participation and support.

Q11 How many times have you taken students on outdoor, environmental education field trips in your career?



**Figure 8: Number of Times Taking Students on EE Field Trips**

## **REASONS FOR PARTICIPATING IN OUTDOOR, ENVIRONMENTAL FIELD TRIP PROGRAMS**

A list of reasons for participating in outdoor EE programs was provided in the survey, along with the opportunity to provide open-ended responses of additional reasons. Respondents could choose more than one answer to this question and most of them chose multiple answers. The most common reasons were Learning/Enhance Curriculum (87%), Hands-On Activities (80%), to Get Outdoors/Experience Nature (84%), followed by Expose Kids to New Places and People (72%) and Fun (67%). The least likely reasons were because It's Required, or Other Teachers from my School Already Attend. The results were similar to the previous survey. There were three comments that included:

1. Collier County, with 80% of its land in conservation, is often the least understood by the people who live here relative to visitors from other areas. Any opportunity to provide outdoor field experiences for students is critical to the sustained growth of our county.
2. Connect students to the place where they live.
3. Hands on trawl and water sampling for AICE exam.

**Table 7: Reasons for Participating in EE Field Trip Programs**

Q12: What are the primary reasons for participating in outdoor, environmental field trip programs? (check all that apply)

ANSWER CHOICES	RESPONSES
Learning/Enhance Curriculum	87.27% 48
Hands-On Activities	80.00% 44
Get Outdoors/Experience Nature	83.64% 46
Expose Kids to New Places and People	72.73% 40
Fun	67.27% 37
It's Required	7.27% 4
Other Teachers from my School Already Attend	7.27% 4
Total Respondents: 55	

**REASONS PREVENTING PARTICIPATION IN OUTDOOR EE PROGRAMS**

As previously noted, this survey included a higher proportion of teachers who have participated in outdoor EE programs, so the results of this survey question are less representative of those who have not already attended this type of program. This is evident by the 25% of responses stating “nothing” is preventing participation. However, nearly the same number of responses, 24%, stated a “Lack of time/too busy.” Two of the most highly chosen responses were “Costs/Too Expensive” with 47% and “Transportation constraints” with 42%. In the previous survey the costs were the number one constraint with 62% and “Transportation constraints” was second with 46%. There is a current and well-known shortage of buses and drivers that was recognized by respondents, but it appears to be an ongoing concern since it ranked so highly in the previous survey. In addition, 29% cited “Difficulty with chaperones” as a constraint which was also 29% in the previous survey. Perhaps assistance by EE providers in overcoming these constraints would increase participation.

There were five open-ended responses captured including the comment that, “Having to take a training to be able to attend the field trip” and “Teachers cannot attend mandatory trainings/lack of teacher interest” was a constraint. Required teacher training was a prominent constraint in the previous survey. Since COVID, the use of remote methods for meeting and training has become ubiquitous and results of the MA demonstrated increased use of this tool among EE providers. Although difficult to quantify, the training requirements among the EE providers in the Field Trip Specialist program seems to have lessened since the previous study in subtle ways such as not requiring currently trained teachers to take the training again on an annual basis and through offering remote options that reduce the time commitment by teachers. One comment was “Not sure, We just haven’t done too many in the grades I have taught.” Two final comments were specifically aimed at Rookery Bay and bussing:

- Dock needed to be fixed
- RB is always cancelling, but bussing is the biggest issue



**Table 8: Reasons Preventing Participation in EE Programs**

Q13 What reasons prevent you from participating in outdoor, environmental field trip programs? (check all that apply)

ANSWER CHOICES	RESPONSES
Nothing	25.45% 14
Lack of time/Too busy	23.64% 13
Costs/Too expensive	47.27% 26
The outdoors is a challenging place for a field trip	3.64% 2
Lack of administrative or institutional support	14.55% 8
Not interested	0.00% 0
Engage in other field trips that are not environmental	0.00% 0
Transportation constraints	41.82% 23
Lack of student interest/participation	5.45% 3
Not aligned with the curriculum	14.55% 8
Difficulty with chaperones	29.09% 16
Total Respondents: 55	

**FACTORS LIKELY TO INCREASE PARTICIPATION IN OUTDOOR ENVIRONMENTAL FIELD TRIPS**

Open-ended responses were captured in question 14 about the factors likely to increase participation in outdoor environmental field trip programs and those responses are listed below and grouped by category. Responses were repeated when they fit into more than one category and the responses were not altered, except for spelling corrections. The following twelve themes, related to increasing participation, emerged and are listed below on the left. The right hand column contains the ranked responses from the previous survey.

**Table 9: Factors Likely to Increase Participation in EE Programs Comparison**

Ranking	Recent Survey Results	Survey Results from 2014
1.	Curriculum Alignment or Standards	Reduced Costs and Increased Funding
2.	Costs/Financial	Funding for Buses and Transportation
3.	Engaging, Creative, Hands-On, Fun	Alignment with Curriculum
4.	Reliable Transportation	Administrative or Team Support
5.	Beneficial or Meaningful for Students	More Time and Better Timing
6.	Availability and Scheduling	Improvements to Organizational, Coordination and Communication Challenges
7.	Guides and Site Relationship	Increased Offerings or Opportunities

8.	No Training	Improvements to Training
9.	Organized Program	Outdoor Leaders or Guides Needed
10.	CCPS Approved	Testing Constraints
11.	Chaperones	Support for Finding Chaperones or Addressing Chaperones Challenges
12.	Other	Nothing Needed/Already Participate
13.		Other

#### Curriculum Alignment or Standards

- Align with the curriculum.
- Curriculum based lessons that are engaging.
- Aligns with standards
- If the trip could align to kindergarten curriculum.
- Activities aligned to standards
- Connection to curriculum
- Tied to standards
- If it were part of my Physics curriculum
- Field trips that align with the curriculum
- A connection to classroom standards
- Lessons that are aligned to learning goals
- Alignment with the curriculum
- The class itself opens up to many possibilities that can be integrated into the curriculum

#### Costs/Financial

- Cost
- Financial support
- Inexpensive
- Cheaper buses!
- If admission was free
- No cost to the school.
- Funds for travel provided or venue reduces costs
- I would participate if the field trip and busses were paid for.
- Having the funds to provide transportation and admission to places.
- Low cost/free admission.
- Reasonable cost for the place and transportation
- Free entry
- Funding

#### Engaging, Creative, Hands-on, Fun

- Engaging for students
- Engaging activities.
- Curriculum based lessons that are engaging.
- Field trips that engage students in exciting new experiences.

- Fun
- The hands-on experience is great.
- Opportunities for students to learn in a creative way
- Field trips that engage students in exciting new experiences.

#### Transportation Issues

- The biggest pinch points for field trips are bussing (always an issue),
- Confirmation of reliable transportation
- Reliable transportation
- If busses didn't have to leave school at 9:30 – 10 and have to leave RB by noon
- The issue is the CCPS bus driver shortage which makes full day trips difficult.

#### Beneficial/Meaningful for Students

- If it is going to be beneficial to my students
- Participate in real situations outside the walls is more meaningful for kids.
- Students love to learn.
- If it is enriching to the kids

#### Availability and Scheduling

- Availability
- Convenient dates
- Many dates available
- Scheduling on agreeable dates

#### Guides & Site Relationship

- Knowledgeable guides
- Tour guide
- A positive relationship results in positive experiences for students. One negative encounter can kill a program.
- The teacher's personal relationship with the staff and volunteers of the hosting organization.

#### No Training

- Not having a required training.
- no training needed

#### Organized Program

- Information and planning is easy
- Well run

#### CCPS Approved

- If we have age appropriate trips and they are approved.
- If they are pre-approved by CCPS

#### Chaperonnes

- Chaperones

Other

- Lack of teacher knowledge/understanding of the experience provided
- I love field trips.
- Public awareness of opportunities
- RB has cancelled on me for two years in a row.. I took my students to Tigertail and did my own seine net and water sampling.

**FACTORS LIKELY TO DECREASE PARTICIPATION IN OUTDOOR ENVIRONMENTAL FIELD TRIPS**

The focus of this section is on deterrents or obstacles likely to decrease participation in outdoor EE programs and there were a series of thematic responses, similar to what was found when asking about benefits that would increase participation. Responses were repeated when they fit into more than one category and the responses were not altered, except for spelling. The fourteen themes emerged below and are listed in the table. In responses to both reasons that would increase participation and factors likely to decrease participation there are many similarities between the current and previous research which indicates a fairly clear picture of these factors which could be addressed by EE providers.

**Table 10: Factors Likely to Decrease Participation in EE Programs Comparison**

Ranking	Recent Survey Results	Survey Results from 2014
1.	Costs	Increased Costs or Decreased Funding
2.	Busing, Transportation Issues, and Distance	Lack of School or Administrative Support, Increased Paperwork and Restrictions
3.	Availability, Scheduling, and Coordination	Increased Time or Effort Involved
4.	Lack of Curriculum Alignment	Lack of Curriculum Connection
5.	Nothing	Transportation Issues and Distance
6.	Lack of Engagement and Interaction	Lack of Chaperones
7.	Training Requirements	Timing of Field Trips and Trainings
8.	Chaperones	Training Requirements
9.	Lack of Adaptability	Lack of Field Trip Guides
10.	Weather	Approach of EE Provider
11.	Other	Poor or Difficult Weather Conditions
12.		Student Behavior
13.		No Obstacles
		Other Reasons

Costs

- Cost

- Cost
- Cost
- Cost
- Cost
- Costly
- Costly buses
- Funding
- Funding
- Lack of funds
- If admission was high in cost and transportation was covered.
- Not having the funds to provide transportation and admission to places.
- When we have to find money to pay, teachers do not get paid enough. Also, not that many businesses in Immokalee willing to pay!
- Too expensive

#### Busing, Transportation Issues, and Distance

- Not having the funds to provide transportation and admission to places.
- If admission was high in cost and transportation was covered.
- Bussing
- Transportation constraints
- Transportation
- Transportation
- Transportation
- Transportation issues
- Distance to our school

#### Availability, Scheduling, and Coordination

- If the trip isn't organized well by venue
- Coordination of the various schedules and logistics.
- Testing. (Limited days out of classroom allowed because of fears regarding "loss of instructional time" in tested areas.)
- It would be easy to have someone help me plan them out and to prepare the paperwork for me.
- Lack of support
- Lack of interest/ no time
- Limited time at the site
- If it is rushed

#### Lack of Curriculum Alignment

- Not aligning to kindergarten curriculum
- No academic connections
- When it doesn't align with my curriculum
- Trips that do not align to learning goals and standards

### Nothing

- Nothing
- Well let's see... I have done them in the cold, heat, rain, and with a knee brace. Fever and stomach issues are usually my limit.
- Me personally, not a thing 😊

### Lack of Engagement and Interaction

- Activities that will not keep students engaged.
- Less-engaging hands-on activities.
- There are interactive activities for the students

### Training Requirements

- Having a required training.
- Required trainings that teachers can't attend and high costs.

### Chaperones

- Chaperones
- Lack of chaperones

### Lack of Adaptability

- Constraints in activities
- A rigid mandated structure of the trip where I am not able to adapt or facilitate.

### Weather

- Heat
- Weather

### Other

- I will continue to do them but RB is becoming unreliable. I had chaperones and buses scheduled then Morgan changed my dates and I couldn't change them. Trips this year were cancelled because of the docks being worked on. Really? They couldn't have done that during off season KNOWING we have AICE Marine teachers relying on these trips for hands on learning for exam. Not just mine, all CCPS AICE marine trips were cancelled. It takes a month to get approval from the district. Kids were very disappointed about missing out on the boat trip. Morgan did make arrangements to meet me at Tigertail the first day so we were able to do smaller groups with the seine net and sampling tools. Usually I wouldn't complain and just keep my mouth shut but with all the changes since Dave left it just isn't the same anymore.

## HOW EE PROGRAMS ARE FOUND

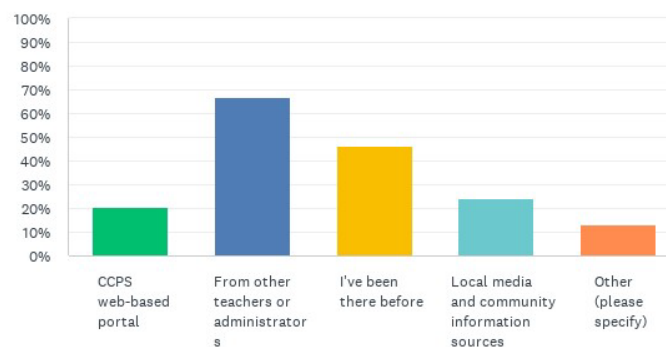
Question 16 asked about how teachers and administrators find out about potential outdoor environmental field trip programs and the majority, 67%, learned about them from other teachers or administrators. Nearly half, or 46%, stated they had been there

before indicating repeat attendance. The CCPS portal (20%) and the media (24%) were less prominent choices. Other answers included:

- I come up with my own!
- This survey prompted my exploration and inquiry
- Not sure. New to this.
- Maintaining long-standing relationships with our partner organizations.
- Mr. Ryan Westberry Secondary School Coordinator
- I don't know

This question was not asked on the previous survey.

Q16 How do you find out about potential outdoor, environmental field trip programs?

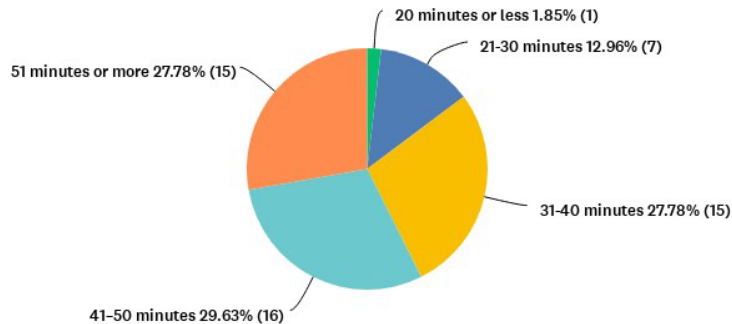


**Figure 9: Ways that Potential EE Providers are Found**

### **DISTANCE WILLING TO TRAVEL**

Respondents were generally willing to travel for field trips with 28% willing to travel more than 51 minutes and 30% willing to travel 41-50 minutes, nearly an hour or more. Only one person was willing to travel only 20 minutes and only 13% were willing to travel 21-30 minutes. Another 28% were willing to travel 31-40 minutes. This demonstrates an overall willingness to travel at least 40 minutes or more from 86% of respondents. One example is that nearly all sixth grade students participate in the Big Cypress Preserve SWAMP program which means that every school is traveling whatever distance is necessary to participate. In the previous study 82% of participants were willing to travel 40 minutes or more showing a slightly greater willingness to travel than previously.

### Q17 How far will you travel for a field trip?



**Figure 10: Distance Willing to Travel for Field Trips**

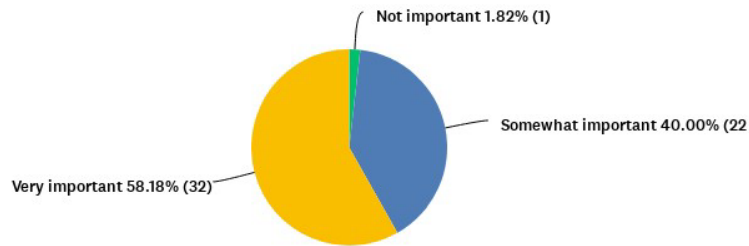
### IMPORTANCE OF CORRELATION TO STANDARDS

The majority of respondents, 58% (59% in the previous study) stated that it was very important for field trips to be correlated to standards. In addition, 40% (36% in the previous study) said it was somewhat important, with a total of 98% stating it was either somewhat or very important. Only 2% said that it was not important which means that these correlations are valuable to teachers and therefore field trip providers should attempt to provide the correlations. Some comments indicated potential standards to consider:

- District Mandated Any standards that it goes with
- Any of our required grade level standards.
- Science and ELA, relative to grade level.
- Florida State Sunshine Standards for Science
- Any Earth, Space, Life Sciences, or Physical Science Standards
- AICE exam sampling tools



Q18 How important is it to you that the field trip is correlated to standards?



**Figure 11: Importance that Field Trips are Correlated to Standards**

### ANNUAL NUMBER OF CLASSES STUDENTS RECEIVE ON ESTUARY, WATERSHED OR OCEAN TOPICS

The most common response was zero with between 25-32% stating that students did not receive estuary, watershed, or ocean education. However, slightly fewer respondents stated that their students received between one to five classes on estuaries and watershed. The least common topic was oceans. There appears to be a need for increased exposure to these topics, which are particularly relevant in coastal Collier County, Florida where much of the local area is affected by and dependent on coastal resources. While field trips are the focus of this research, in-classroom presentations or sharing resources with teachers may also help to fill this niche.

**Table 11: Annual Number of Classes Students Receive on Estuary, Watershed, and/or Ocean Topics**

Q19 How many class or activity periods of estuary, watershed and/or ocean instruction do your students receive in a typical school year?

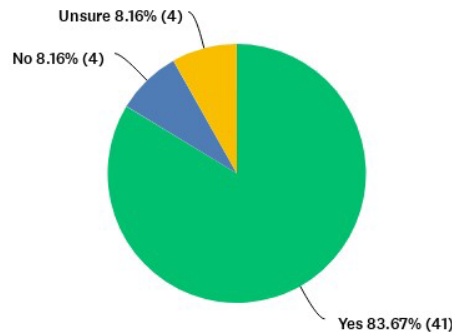
	NONE	A PORTION OF ONE CLASS	ONE TO TWO CLASSES PER YEAR	3 TO 5 CLASSES PER YEAR	6-15 CLASSES PER YEAR	MORE THAN 15 CLASSES PER YEAR	TOTAL
Estuaries	26.92% 14	11.54% 6	26.92% 14	23.08% 12	5.77% 3	5.77% 3	52
Watershed	32.69% 17	9.62% 5	26.92% 14	21.15% 11	7.69% 4	1.92% 1	52
Ocean	25.49% 13	11.76% 6	15.69% 8	23.53% 12	11.76% 6	11.76% 6	51

### PARTICIPATION IN TEACHER PROFESSIONAL DEVELOPMENT

The majority of teachers, 83% (93% in previous survey) have participated in a professional development program, while only 8% (4% in previous survey) have not

participated, and 8% (3% in previous survey) were unsure. In addition, respondents were asked to list the last three that they participated in and the responses are below.

Q20 Have you ever participated in professional development or teacher training programs?



**Figure 12: Participation in Teacher Professional Development**

Teachers were asked to list the last three trainings that they had participated in and several of the trainings were part of the CCPS Field Trip Specialist Program. All the responses are listed below and are grouped in alphabetical order. This list provides some insight into the range of trainings that teachers are participating in and could provide potential partnership or marketing opportunities. In the previous survey, far more of the responses included the Field Trip Specialist Program training.

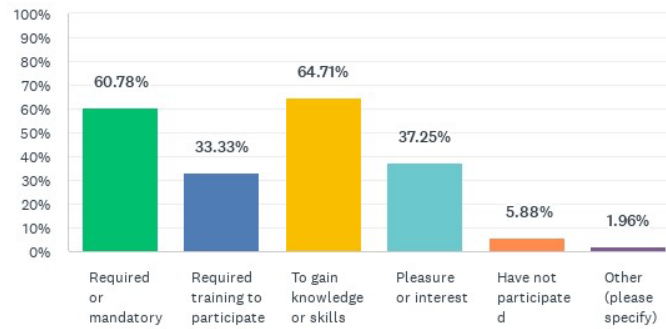
- ACSI in house
- Adobe Express
- As District Elementary Science TSA for five years, participated in all trainings with all organizations in Collier County.
- Canvas Training
- CCPS related PD
- CCPS Science Professional Development
- CCPS Technology Trainings
- Conference
- Corkscrew Swamp Sanctuary
- Curriculum
- DOV
- Everglades
- Everglades
- Everglades Foundation Curriculum
- Everglades Literacy
- Everglades Training-2 times
- FGCU Stem Academy
- FGCU STEM workshops
- First Aid

- FTEM
- Foundations
- Gifted Endorsement
- Guy Harvey
- In Service CEUs
- Kagan strategies for new teachers
- LETRS
- Marine lab
- Microsoft Accessibility Tools
- Most school/curriculum related
- New ELA curriculum
- New science teacher class
- Not sure. I attend a lot.
- Programs provided by CCPS
- Reading Endorsement
- Rookery bay
- Rookery Bay
- Rookery Bay – revised Survivors w/ Conservancy
- Rookery Bay Science Teachers
- Rookery Bay Survivors
- Science Fair
- Social/Emotional Trainings
- Teacher Evaluation Model
- Testing
- Too many to list
- Upcoming IMSE Training
- Whitaker institute STEM
- Youth Mental Health

## **REASONS FOR PARTICIPATING IN TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS**

An even higher number of 92%, participated in teacher professional development programs according to the responses considering that respondents could choose as many as applied to them. The top reason being “to gain knowledge or skills” at 65% and because it was “required or mandatory” at 61% of the total number of respondents who chose that answer. In addition, approximately one third or 33% choose that it was “required to participate in the field trip” and 37% due to “pleasure or interest.” A majority of respondents participate because it is required for some purpose. The training for the FTSP is generally required by all providers, although those requirements seem to be lessening over time, and teachers continue to share their frustration with required trainings. However, some teachers are interested in learning and unique, hands-on, locally relevant experiences offered during in-service days or over the summer are likely to attract a small but dedicated audience. Partnering with CCPS to offer the required FTSP during an in-service day would likely be well-received by teachers.

Q21 What was the reason for your participation in a professional teacher development program?



**Figure 13: Reasons for Participating in Teacher Professional Development Programs**

## **OBSTACLES TO ATTENDING TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS**

The primary reason given as an obstacle to attending professional teacher development programs was the timing of the event with 76% of respondents identifying this obstacle, and 57%, also the majority, in the previous survey. Forty-One percent responded that No time/Too busy was the primary obstacle to attending professional teacher development programs, and 49%, also second place, in the previous survey. Training not relevant garnered 25% followed by transportation costs at 22%. This differed from the previous survey that had registration costs as an obstacle identified by 29% of respondents, while travel/transportation costs was identified by 28%. Three of the 6 open-ended responses focused on the difficulties of participating in training as a parent, specifically:

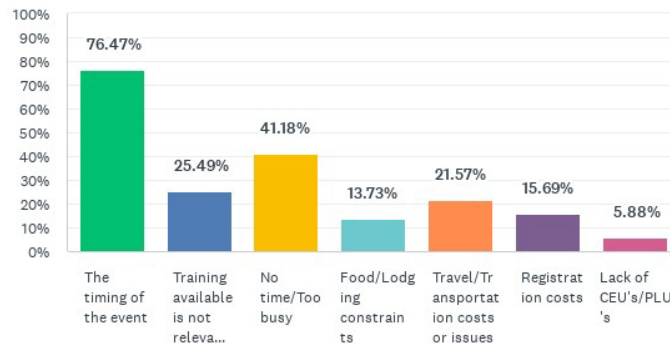
- Raising a family
- Lack of personal childcare while time of training events.
- No childcare and unpaid

Two of the open-ended comments noted the lack of pay, and payment for training, received for additional training time. This was the primary comment from the last survey.

- No childcare and unpaid
- CCPS won't fund

The response with the lowest response rate was Lack of CEU's/PLU's which is interesting because EE providers have not been offering them, so this does not seem to have a critical impact on teacher participation.

Q22 What has prevented you from attending professional teacher development programs?



**Figure 14: Obstacles to Participating in Teacher Professional Development Programs**

## BEST TIME TO ATTEND TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS

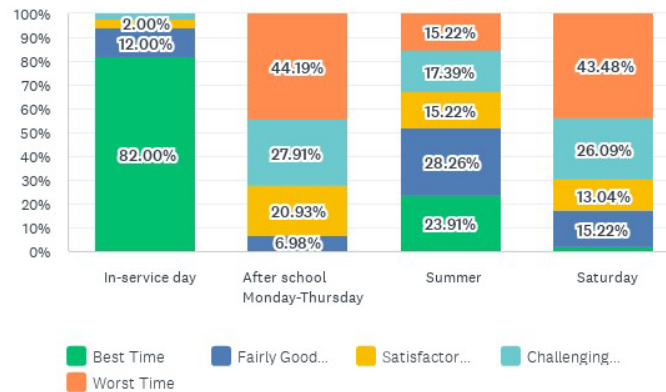
The top response to the survey question about the best time to attend professional teacher development programs was during an in-service day with 82%, followed by summer with 24%. In the previous survey, the majority of respondents also specified an in-service day as the preferred time, however, in the last survey season and timing throughout the year was included. But because the seasonality showed no trends, it was excluded from the current survey. After school and Saturday were the worst times with 44% for both choices. However, 44% is approximately half of the respondents so there was variation in the preferences. Summer was fairly good for 28% of respondents, while after school and Saturday was challenging for 28% and 26% respectively. The open-ended comments reveal that individual lifestyles, such as being parents or having a hobby, are drivers of this preference among teachers. Open-ended responses included:

- I compete in distance longboarding competitions in my free time and train in my free time. It is what helps me keep a work-life balance in line for good mental health. I prefer not to do school related activities on Saturdays. I'd rather attend functions after school so that it does not cut into my weekends.
- I coach sports all year and we typically have games on Saturday mornings.
- As a parent, non-school hours are nearly impossible.

It would be ideal if a portion of an in-service day were set aside for Field Trip Specialist Program training, but the following open-ended response may make that unlikely.

- In-service days are the best, but they are always taken up by something else that is mandated by the school district.

Q23 When is the best time to attend professional teacher development programs?



**Figure 15: Best/Worst Times to Attend Teacher Professional Development Programs**

**PROFESSIONAL DEVELOPMENT TRAINING RELATED TO ESTUARIES, WATERSHEDS, AND OCEANS**

The majority of respondents had received no professional development training on estuaries, watersheds or the ocean in the last three years, which was the same result garnered from the previous survey. While many of the respondents were science teachers, the survey was not solely aimed at those types of teachers, so some variation would be expected. However, approximately a quarter to one third did receive less than eight hours of training in these subjects, while very few received more than eight hours. In general, that indicates either a lack of access or interest in professional development training on these topics.

**Table 12: Number of Hours of Participation in Professional Development Focused on Estuaries, Watersheds, or the Ocean**

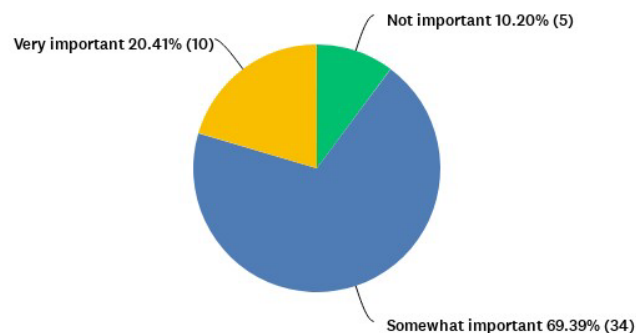
Q24 In the last three years, how many hours of professional development in science have you obtained related to estuaries, watersheds, and the ocean?

	NONE	LESS THAN EIGHT HOURS	8-16 HOURS	16-24 HOURS	24-32 HOURS	32-40 HOURS	MORE THAN 40 HOURS	TOTAL
Estuaries	54.00% 27	30.00% 15	12.00% 6	2.00% 1	2.00% 1	0.00% 0	0.00% 0	50
Watershed	48.98% 24	34.69% 17	10.20% 5	4.08% 2	2.04% 1	0.00% 0	0.00% 0	49
Ocean	54.00% 27	28.00% 14	12.00% 6	4.00% 2	2.00% 1	0.00% 0	0.00% 0	50

## IMPORTANCE OF CONTINUING EDUCATION UNITS IN DETERMINING PARTICIPATION IN PROFESSIONAL DEVELOPMENT

Sixty-nine percent of respondents said that continuing education units (CEU's) are Somewhat Important, while only 59% said this on the previous survey. Only 20% said it was very important, while 21% said they were very important on the previous survey. There were 10% on this survey and 24% or approximately one quarter of respondents on the previous survey said it was not important to them. With the low ranking of this as an incentive on a prior question, the use of CEU's/PLU's to motivate teacher participation in EE professional development programs is questionable. If it was not difficult to offer this incentive it could be helpful, but the data does not support this as essential.

Q25 Are the earning of CEUs (continuing education units) and/or PLUs (professional learning units) important in determining whether or not you will participate in a professional development opportunity?



**Figure 16: Importance of CEU's in Determining Participation in Professional Development**

## TYPE OF PROFESSIONAL DEVELOPMENT NEEDED OR WANTED

Approximately half of respondents answered this question, which was open-ended and the responses are listed below and generally grouped by topics assigned by the contractor. If a response fitted into more than one category, then it was repeated and responses were only changed to correct spelling errors. There were similar themes to these responses when compared to the responses for the reasons why teachers participate in professional development programs. Several responses focused on the hands-on approach to learning, with specific mention of Florida, environmental, and science interests. There was again an interest in alignment with standards along with mention of its importance in enhancing classroom teaching. There were more responses in the previous survey but some similarities to the results are provided as a comparison below.

**Table 13: Type of Professional Development Needed or Wanted Comparison**

Ranking	Recent Survey Results	Survey Results from 2014
1.	Hands-On	Alignment with Standards or Curriculum
2.	Florida, Environmental Science Content	STEM, Science, Conservation, Environment Focused
3.	Alignment with Standards or Curriculum	Ocean, Watershed or Estuary Focused
4.	Enhance Classroom Teaching	Provide Opportunities for Students, Enhance Student Learning
5.	None	Sampling, Real World Experience, Field Work
6.	Other	Hands-On
7.		Florida Focused
8.		Seeking Local Connection
9.		Any Training and Not Sure
10.		Any Training and Not Sure
11.		Other
12.		None

**Hands-On**

- Hands on
- Hands on activities
- Hands on science activities that are easy to implement in class
- Hands on training to make lessons, plans, and activities.
- Hands on.
- I love learning about hands on activities I can do in class
- Ones that are interesting and not involving sitting!
- Activities, labs, opportunities to strengthen student understanding of content

**Florida, Environmental Science Content**

- Connecting physical science standards to Florida environment
- Anything that relates to Florida ecosystems, food webs, and relationships among organisms.
- More information about content that is about local wildlife or habitats
- Relating chemistry to the environment
- New science teacher training
- Analysis of water quality data in response to natural disasters and or water management releases
- Activities, labs, opportunities to strengthen student understanding of content.

**Alignment With Standards or Curriculum**

- Curriculum



- Anything relevant to my curriculum
- Connected to the new requirements for reading
- Connecting physical science standards to Florida environment
- Something that hits many standards all at once

#### Enhance Classroom Teaching

- Those that help with classroom teaching and activities
- Those that apply to my duties
- Related to my subject but I am open to participate in field trips because they are a valuable and enrich the learning process.

#### None

- None
- None at this time.

#### Other

- Unsure
- More planning time
- I could use more help with writing instruction.
- Related to my subject but I am open to participate in field trips because they are a valuable and enrich the learning process.
- Resources to make science more enjoyable for first grade but don't cost a lot usually it comes out of teachers pocket.

## **COVID PANDEMIC IMPACTS ON CURRENT TEACHING SITUATION**

Approximately half of respondents skipped this question and the responses below indicate that nine respondents, or 28%, stated that impacts are no longer felt. The remainder of the open-ended answers are listed below with a few insightful comments that are worth considering when teaching EE programs. The themes were broadly that 1) Students lack academic and social skills, 2) There's reduced motivation by students and parents and expectations have been lowered, 3) Recognition of reduced outside experiences and field trips, and 4) Increased reliance on technology.

#### Students Have Reduced Social and Academic Skills and Gaps

- Students have less critical thinking skills.
- Most students are one to two years behind
- It created learning gaps for students.
- Kids still seem to lack requisite skills for reading and math.
- Major gaps in student skills: socialization, reading, basic math, addiction to screens.
- Detrimental to the students reading and understanding skills
- not much unless you consider the academic deficits of the children I have recently.

- Social skills, separation from family, short and long term memory of what has been taught
- Students are having a more difficult time reading.
- Yes, students seem to be scoring less than they usually do.
- Student motivation and reading comprehension has greatly diminished.

#### Reduced Motivation and Expectation

- Lack of motivation by students
- Apathetic students not wanting to do anything.
- Students are less invested in their education
- Student motivation and reading comprehension has greatly diminished.
- The supportive attitude has decreased from both parents and students.
- Expectations for students have been lowered.
- Completely collapsed the need or want to be outside for students

#### Less Outside and Field Trip Experiences

- Students have less outside experiences
- Students have not been going to field trips

#### Increased Reliance on Technology

- Challenging. Learning new technology takes a lot of time and energy.
- More reliance on technology.
- Students and teachers rely more heavily on technology to deliver instruction.

#### Other

- Limited the opportunities.
- Students are missing

### **RECENT HURRICANE EFFECTS ON THE CURRENT TEACHING SITUATION**

More than half of respondents skipped this question and the responses below indicate that ten respondents, or 36%, stated that there were no impacts. The remainder of the open-ended answers are listed below with a few insightful comments that are worth considering when teaching EE programs. The themes were broadly that there was 1) Inconsistent schooling, 2) Mental and emotional challenge, 3) Impacts to the outdoor areas, and 4) Challenges for field trips.

#### Inconsistent Schooling

- A lot of inconsistent curriculum for the students to retain information.
- less instructional days, so less time for field trips
- We have lost instructional days.
- Delayed the curriculum

#### Mental and Emotional Challenges

- It was hard during that time. We need to be safe in hurricane seasons.

- Many of My students are traumatized, which then makes getting back on track harder.
- Some students have housing insecurity.
- Hurricane fatigue is a real thing.

#### Outdoor Impacts

- Changed outdoor environment.
- The latest hurricane has destroyed many habitats that we usually see.

#### Challenging for Field Trips and Outdoor Experiences

- It has given some major set backs with scheduling field trips
- Made it more challenging to find outdoor experiences for students.

#### Other

- Places are not completely destroyed
- They blow, we pick up. We move on. Fact of life in SW Florida. That said, hurricane fatigue is a real thing.
- We have less students living near our school.
- Yes and no. The impact was very minimal for my area.
- Yes, last year a bit but this year has been smooth
- Yes. But not to the extent of Covid
- Some schools were affected but mine was not

### **CHALLENGES DELIVERING CLASSROOM EDUCATION**

Approximately half of respondents skipped this question and a total of 31 provided an open-ended response which is grouped below. The themes included a 1) Lack of time, money, and resources, 2) Class size, although these responses fit well with the lack of resources theme, 3) Lack of hands-on experiences and real world relevance, 4) Apathy, and 5) Institutional issues, 6) None, and 7) Other.

#### Lack of Time, Money, and Resources

- Time
- Time and money
- Time and money
- Time to plan and buy resources.
- Time, money, and materials for reteaching
- Time. We have too many things to cover with the minutes we are provided.
- Time. Too much curriculum to cover.
- Competing with other classes for time
- Resources/money
- Classroom funds
- Lack of time and curriculum is too crowded
- Resources are too expensive to provide all students, usually class size is about

- Sometimes just having enough time to complete everything
- Supplies
- Having enough basic resources for my students,
- Having enough time to do hands on activities while still teaching the basics of content.
- Everything is on computer and there is too much information without any paper materials or resources to use. Books, etc.
- Field Trip Budget isn't the greatest and I need to ensure that communication is quick and efficient from all parties when doing a field trip.

#### Class Size (relates to the lack of resource above)

- Class size
- Resources are too expensive to provide all students, usually class size is about 18
- Too many students in each class.

#### Lack of Hands-on Experiences, Time to Them, and Real-World Relevance

- Need more hands on opportunities.
- Hands on real-world relevance
- Students inability to connect relevance to ANY lesson.

#### Apathy

- Students who are apathetic to learning
- Lack of intellectual curiosity in students.
- Student apathy

#### Institutional Issues

- CCPS school board
- District and state restrictions

#### None

- None
- None

#### Other

- Everything is on computer and there is too much information without any paper materials or resources to use. Books, etc.
- Field Trip Budget isn't the greatest and I need to ensure that communication is quick and efficient from all parties when doing a field trip.
- Interruptions
- Disruptive behavior
- Language barriers
- Too many accommodations, and scaffolding
- Values and a safe environment for students. Professionalism.

## CHANGES SEEN IN EDUCATION OVER CAREER

In question 30, the survey asked, "What major changes, both good and bad, have you seen over your career in education?" Approximately 56% of respondents skipped this question and the responses received were diverse. General themes included 1) Student and parent behavior, 2) Institutional changes and decision making, 3) Technology impacts, 4) Field trip observations, 5) Testing impacts, 4), None, and 5) Other.

### Student and Parent Behavior

- Bad – lack of consequences for student behaviors, constraints on time/resources to schools, loss of ESSR funding
- I have not been teaching long enough. But students are very disrespectful and play games on technology all day. Laptops are a real problem. They should be on paper again.
- I have seen a huge change in student interests and how they participate in their own education.
- Lack of accountability for students and increase in entitlement have made teaching much harder.
- Students are so fixated on a 'grade' and not learning for learnings' sake.
- Lack of education being important, excuses from parents, lack of parent involvement
- Lack of student engagement and initiative is increasing. It is hard to motivate students to learn- there is very little follow through from admin to support
- Not enough support and bad student behavior.
- Parents are now given too much power. The kids have accountability because their parents complain and they get out of what they need to complete/accept in order to be successful
- Parents do less parenting and more enabling. Students have difficulty finding joy in their lives. Electronics suck them into the void. Students cannot/will not think for themselves.

### Institutional Changes and Decision Making

- Being able to teach the brightest minds I've seen in the highest levels of High School Physics and then to see the county take away those courses when they institute minimum enrollment numbers.
- CCPS school board, making us cookie cutter teachers. i.e. teach the same way, every day.
- Education seems to be ran by participants that are not BOTH student and academically focused. Some leaders are self-serving and do not understand the impact of their decisions on the youth of our community.
- Having classes mixed with ELLs and higher level English speakers
- Also, district and state restrictions have pigeonholed teachers and diminished creativity.
- Stress from Administration: Students are coming in at 2-3 grades below grade level and are expecting teachers to do miracles.

- Too many changes in administration, curriculum, class setting, standards.
- The influx of long surveys, distractions to the instructional time, reduction in standards and expectations.
- More paperwork

#### Technology

- Good – improved technology resources for both students and teachers, consistency with science curriculum in Collier County
- Technology aids instruction
- I have not been teaching long enough. But students are very disrespectful and play games on technology all day. Laptops are a real problem. They should be on paper again.
- Negative, everything is online, negative omnipresent phones.

#### Field Trip Observations

- Positive rookery bay and their support.
- Over my career I have had many great experiences watching my classes learn and grow.
- Ridiculous requirements to meeting field trip permits
- We have less field trips. We use to do 2 trips and testing can get in the way of scheduling field trips and having chaperones on hand too.

#### Testing Impacts

- Emphasis on testing in Florida vs. other states. Children naturally love science until we turn it into training them to take a test and limit what they can learn to tested benchmarks rather than their natural curiosities and interests.
- Focus on State tests and lack of depth in the curriculum and now the hostile environment in education created by the governor.

#### None

- none
- None
- none I can think of at the moment.

#### Other

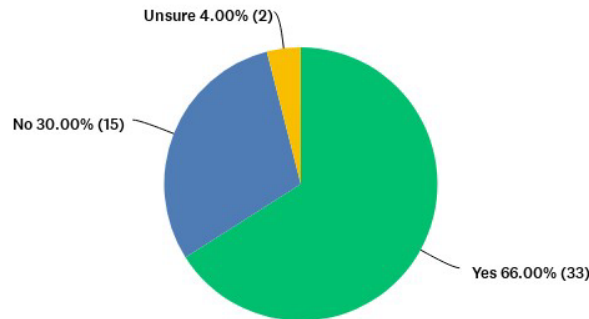
- More people caring but less money
- You don't have the time 😊 My answer would be book-length.

### **KNOWLEDGE OF A NATIONAL ESTUARINE RESEARCH RESERVE IN COLLIER COUNTY**

The majority of respondents, 66% were aware that there was a National Estuarine Research Reserve in Collier County, which is down 10% from the previous survey.

There were 30% that were unaware of the NERR, although the question is intended to raise their awareness. There were 24% who skipped the question and they are not included in the ratio of respondents.

Q31 There is a National Estuarine Research Reserve system of 30 Reserves around the country protected for the purpose of studying estuarine systems through research, stewardship, and education. Have you ever visited Rookery Bay Research Reserve, located in Collier County?

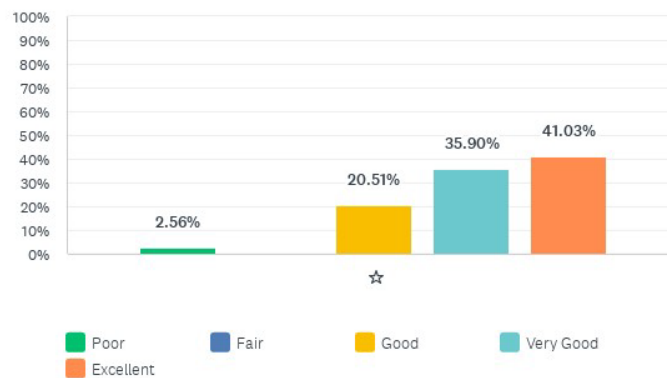


**Figure 17: Knowledge of a National Estuarine Research Reserve in your County**

**RATED EXPERIENCE OF ROOKERY BAY RESERVE**

Respondents were asked to rate their experience with Rookery Bay Reserve on a scale of one to five with the resulting rating of 4.1. Below is the breakdown with the majority of respondents giving the Reserve a rating of good or above.

Q32 How would you rate your experience at the Rookery Bay Research Reserve?



**Figure 18: Rating of Experience with the Rookery Bay Reserve**

## SIGN UP FOR THE FRIENDS OF ROOKERY BAY NEWSLETTER

A total of 47 or 66 respondents answered this question and fully half of those, or 51%, said yes, while 49% said no which will provide a total of 18 new email addresses for the Friends of Rookery Bay.

## INTEREST IN ROOKERY BAY VISITING YOUR CLASSROOM TO TEACH ABOUT ESTUARY, WATERSHED, OR OCEAN EDUCATION

Respondents were asked if they were interested in Rookery Bay staff/volunteers visiting your classroom to teach about estuary, watershed or ocean education and there were a majority of positive responses. Although the primary goal of most EE programs is to get students outdoors and away from the classroom, this type of educational program provides a good introduction, raises interest and awareness, creates relationships with teachers, and may be a good strategy to increase teacher participation in outdoor EE programs.

**Table 14: Interest in Rookery Bay Visiting Your Classroom**

Q34 Are you interested in Rookery Bay staff/volunteers visiting your classroom to teach about estuary, watershed or ocean education?

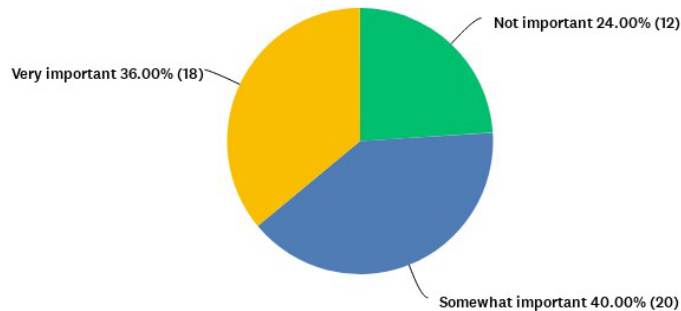
ANSWER CHOICES	RESPONSES
Yes	68.00% 34
No	2.00% 1
Unsure	32.00% 16
Total Respondents: 50	

## IMPORTANCE OF FIELD TRIP MATERIALS IN SPANISH

There was a fairly even three-way split between the option of whether field trip materials being made available in Spanish was important. Overall, 36% said very important and 40% said somewhat important which indicates a higher number of respondents who think this is a good idea.



Q35 How important is it that field trip materials are available in Spanish?



**Figure 19: Importance of Field Trip Materials Being in Spanish**

### **ADDITIONAL COMMENTS SHARED**

Only eight additional comments were shared on the survey including the following:

- Completed the Florida Master Naturalis (Coastal System) course a few years ago. Looking to integrate the Youth Naturalis Program for the coming school year. Let's have coffee 😊
- Field trips to Rookery Bay in the past were always amazing with the exception of some of the volunteers not being good with the children. Letting teachers lead the activities makes more sense than a well-meaning volunteer who doesn't know how to work with the children.
- If field trip is offered to schools, every school should receive a proportional number of spots. These spots should only go to another school if the original school has acquiesced. This year two to three schools usurped all the spots and left other schools with no alternative.
- My school is 5 minutes away, it would be great to have activities and opportunities for students and their families to visit and participate in activities at Rookery Bay.
- Staff is fine to visit classroom but I think our students get more from the experience because they only know Immokalee.
- Collier buses have been arriving late. The trips must start around 10:30-11 and end by noon. Fixing this situation is key. Late buses led to administration cancelling my trips.
- Na
- None
- Thanks!

**THANK YOU PASS TO THE ROOKERY BAY ENVIRONMENTAL LEARNING CENTER FOR COMPLETING THE SURVEY**

A total of 33 emails were captured to receive a free pass to the Rookery Bay Environmental Learning Center at 300 Tower Road, Naples, Florida.

## **DISCUSSION AND RECOMMENDATIONS**

The survey had approximately a 2% response rate and 66 respondents, which was a decrease from the previous study that had a 6% response rate and 196 respondents. The data provides insights into teacher field trip and professional development preferences, although the information is more representative of the views of those who responded, rather than the views of a broader representative sample. However, the overall survey results in this survey were similar to the results from the previous survey conducted during 2014 which further validates the responses and indicates limited changes in the overall perspectives of those that participated. These limitations need to be considered when using the survey data to plan EE programming or make programmatic changes.

Survey respondents were most likely to be:

- Female
- White, although there was a slight increase in those that identified as Hispanic or Latino
- Educated with a Master's degree or Bachelor's degree
- Over 30 years of age, tending to be older than in the previous survey
- Public school teacher, although there was increased participation by private school teachers compared to the previous study
- May teach any grade, but slightly more respondents were teaching elementary school
- If they teach a subject area, likely to be teaching a science topic, but overall unlikely to specialize in estuaries, watershed, or ocean education
- Very likely to have participated in more than one outdoor environmental field trip

Themes and recommendations:

- Alignment or correlation to standards and enhancing classroom curriculum is a significant driver for teachers to participate in field trips and is very or somewhat important to them. In addition, the lack of alignment to standards is fairly significant in reducing participation. Providers ought to align their programs to standards, or at a minimum, discuss with teachers how the field trip can enhance classroom curriculum.
- Secondary issues for participation included hands-on activities, get outdoors/experience nature, and expose kids to places and people, are areas for field trip providers to consider so they can potentially enhance their attractiveness to teachers.
- The lack of reliable buses for field trips impacts their ability to participate. If providers can help teachers overcome this problem, they will be better able to participate.

- Costs and financial constraints are a concern for teachers. However, there is a CCPS budget for field trips so its unclear if teachers are unaware of that or if the responses from private school teachers weighed heavily on this issue. Offering field trips that have zero costs will likely make them more attractive to teachers.
- Secondary issues such as difficulty with chaperones, no need for training, availability and scheduling, and CCPS field trip approval are additional areas for field trip providers to consider in order to support teachers in participating. Training that is required of teachers before participation will be an obstacle for some of them.
- Lack of administrative support was in the top two responses in the previous survey, but was among the bottom three in the current survey, possibly indicating increased support from administration for field trip programs. Demonstrating the effectiveness and positive impact of field trips may influence administrators to continue to support them.
- A high percentage of teachers find out about field trips from other teachers or because they have previously attended. Promoting field trips by talking to teachers in general and teachers who have previously attended is likely to be a good strategy to continue attendance and increase knowledge about field trip opportunities among teachers.
- Distance of travel to a field trip appears not to be a significant deterrent to participation. Therefore, countywide promotion of field trips is likely warranted because teachers anywhere in the district may be willing to travel to a field trip site.
- There were 37-42% of respondents that noted their students received no instruction, or a portion of only one class of instruction, on estuaries, watershed, and/or ocean education. Considering the importance of these topics, there appears to be the opportunity to include these topics while also meeting the necessary standards and correlation to curriculum.
- The majority of teachers had participated in professional development, with several mentioning local programs in addition to CCPS training including Rookery Bay, Corkscrew Swamp Sanctuary, and the FGCU Whitaker STEM Institute. In addition, the Everglades Foundation and Guy Harvey teacher trainings were mentioned, which were also included in the MA research. There has been an increase in available teacher training on estuaries, watershed, and ocean topics. However, there appears to be continued need for teacher training on these topics due to the gap in students receiving instruction and approximately 50% of teachers reporting that they received zero training on these topics.
- Several comments indicated that childcare and lack of pay for teacher training is also an obstacle. Stipends for teachers to attend training courses would overcome at least one additional barrier to participation.
- The timing of teacher training programs continues to be a significant obstacle, along with no time/too busy. An in-service day is the ideal time for teacher

training while other times such as after school, summer, or Saturday garnered equal numbers of respondents, demonstrating no clear preferred timing. If field trip providers were able to offer their teacher training during in-service days, it would likely be well received.

- Continuing education units are only somewhat important, making them a less critical factor for providers offering teacher training programs.
- The majority of respondents wanted hands-on activities as part of the professional development programs they needed or wanted. Their secondary topic of interest was Florida, environmental science content. Ensuring these elements in teacher training will likely make it more attractive to teachers.
- Respondents identified some themes related to COVID pandemic impacts on teaching including that students have reduced social and academic skills and that there are reductions in motivation and expectations. Respondents also identified a few effects that recent hurricanes had on teaching including that there has been inconsistent schooling and that there appear to be a greater amount of mental and emotional challenges for students. Providers may consider these factors when designing and delivering their field trip experiences and consider training staff with this in mind.
- Challenges delivering classroom education were primarily about a lack of resources, such as time and money, and other resource issues such as large class sizes. A few comments included the lack of hands-on experiences and real-world relevance. Providers that do not charge or inordinately make more work for teachers, such as in the booking process, and then deliver programs that help teachers to do better with providing hands-on programs would likely be well-received by teachers.
- Respondents shared changes that they had seen in education over their career and the majority of the responses highlighted negative impacts and challenges, with only a few positive statements such as improved technology. This indicates a challenging work environment which is important for providers to consider.
- The majority of respondents were familiar with the Rookery Bay Reserve, who funded this study, and rated their experience with Rookery Bay at 4.1 out of five, which is an indication that the Reserve has a good reputation and is well-known in the community.
- A high number of respondents responded positively to having Rookery Bay staff or volunteers visit their classrooms. This approach may be a good first step to creating relationships with new teachers who may then participate in a field trip in the future.
- There was not a universal support for making field trip materials available in Spanish, although one third said it was very important. It's unclear whether the effort to do this would be worth the outcome.

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