Connecting Communities at Lighthouse Point
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Background
The main objective of this project was to supplement the Bahamian National Curriculum with interdisciplinary and experiential learning. The venue we choose to employ these teachings was Lighthouse Beach, a promontory located on the southern tip of Eleuthera.

Learning Styles
Figure 5 shows the three main types of learning styles and the methods to teach these styles. We used this chart to create our lesson plans to teach at Lighthouse. While most classrooms mainly serve auditory learners, we designed our lessons to serve all learning styles.

Objectives
1. Using experiential learning
   Experiential learning is when students can see they are learning right in front of them. The purpose of this is to target all types of learning styles.

2. Deepening sense of place
   Sense of place is one’s connection to and understanding of the environment around them. The purpose of this is to learn about the significance of the place, which is not usually taught in classrooms.

3. Applying Interdisciplinary learning
   Interdisciplinary learning is combining multiple subjects and teaching them together. In most classrooms, each subject is taught separately, however our lessons connect them together.

Methodology
Lessons:
1. Most of the Bahamian National Curriculum is taught in a classroom, so we used environmental education and ran field trips at Lighthouse Point to test our hypothesis.
2. During the field trips, we used experiential learning, sense of place, and interdisciplinary learning to teach the students about photosynthesis, the water cycle, and pollution. These three topics are all part of the Bahamian National Curriculum for grades 5.
3. Each lesson was built to serve all types of learners

The students participated in a skit about photosynthesis. This way, they were able to be a part of the teaching process as they were learning.

The students learned about the water cycle so that they could remember the steps clearly.

The students found pollutants on the beach and recycled them in order to gain a deeper understanding between their every action and the environment.

Data Collection
Quantitative data: The quantitative data is in the form of identical written pre and post assessments given to the students directly before and after the three lessons. The assessments included questions from each of the three lessons, Below is the assessment for the water cycle.

Qualitative data: The qualitative data is in the form of informal interviews to hear about the students’ experience at Lighthouse Point. Below are a few of the students we interviewed:

Results
This shows that the post-assessment scores were on average higher than the pre-assessment scores. The p-value, shown on the upper right hand corner, is statistically significant because it is less than 0.05. This shows that there is a real difference between our two data sets, and the improvement from the pre-assessments to the post-assessments is not due to chance.

Though the p-value was significant, the standard deviation also increased in the post assessment data set (the standard deviation of the pre-assessment scores was 28.3, while the standard deviation of the post assessment scores was 29.7).

Many external variables could have led to the difference between standard deviations of the pre/post-assessments. For example, not everyone is being impacted by the lesson in the same way because of different learning styles. The general room for error throughout our data includes the time given to complete the test, the difference of ages of the students, and different schools that the kids attended.

Discussion
Over multiple semesters, CEIS outreach will be creating a field guide, talking more deeply about the programming that we are doing. This will benefit other groups who may want to model this style of teaching.

Island school will be teaming up with the Bahamas National Trust to take this type of experiential programing national.

The types of trips that we have conducted are not specific to Lighthouse Point, though the environment was a large part of the specific lessons. This means that these trips could be conducted at other sites in the future to accommodate different subject matters. If trips to Lighthouse are not able to occur due to access, the government has approved the purchase of Lighthouse to a cruise line company, so the next step is to conduct an environmental impact assessment to acquire permitting. If the construction of the cruise port goes through, the future of the access to the beaches and the of our ability to take field trips to Lighthouse Point would be unknown. However, we will continue to run trips until our access is cut off.

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