



SHOREHAM-WADING RIVER CENTRAL SCHOOL DISTRICT

2021 Summer Program Summary

Presented by:
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8/24/2021

DRAFT



Offered Programs

- Elementary At-Risk Summer Program
- High School Advanced Placement Week Program
- Secondary Science Research Program
- High School Peer Theater Summer Program
- Summer Enrichment and Remediation Program
- BNL SPARK Program
- Summer Theater Community Program
- Early Start Program
- Roundout

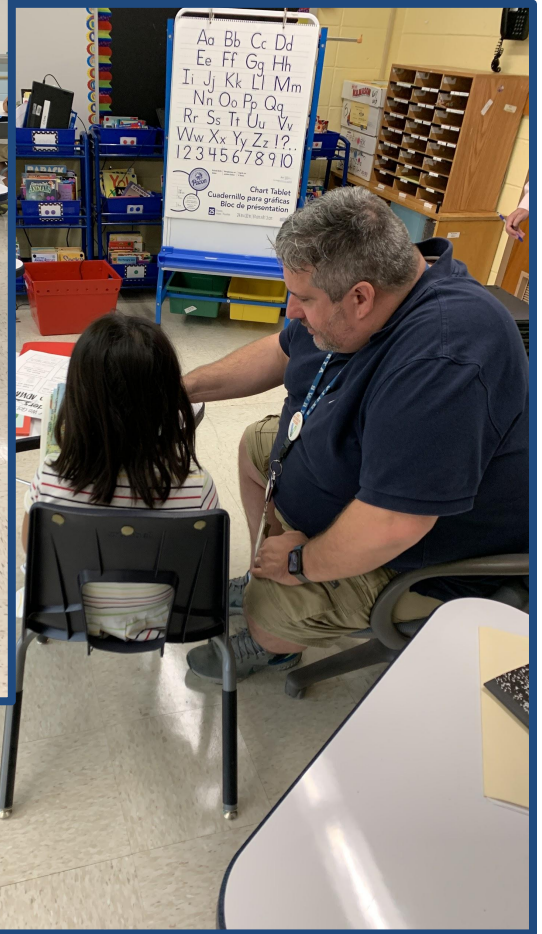
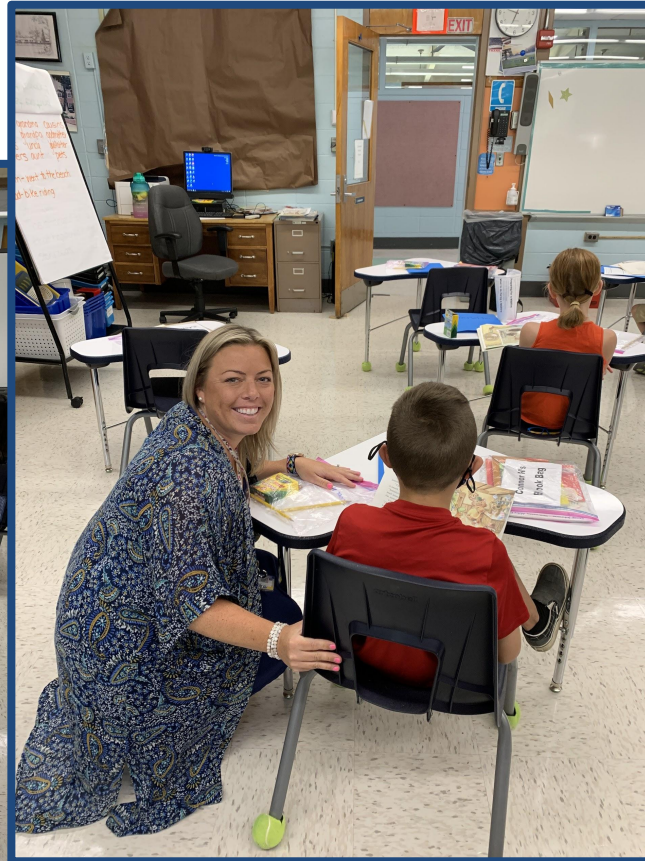
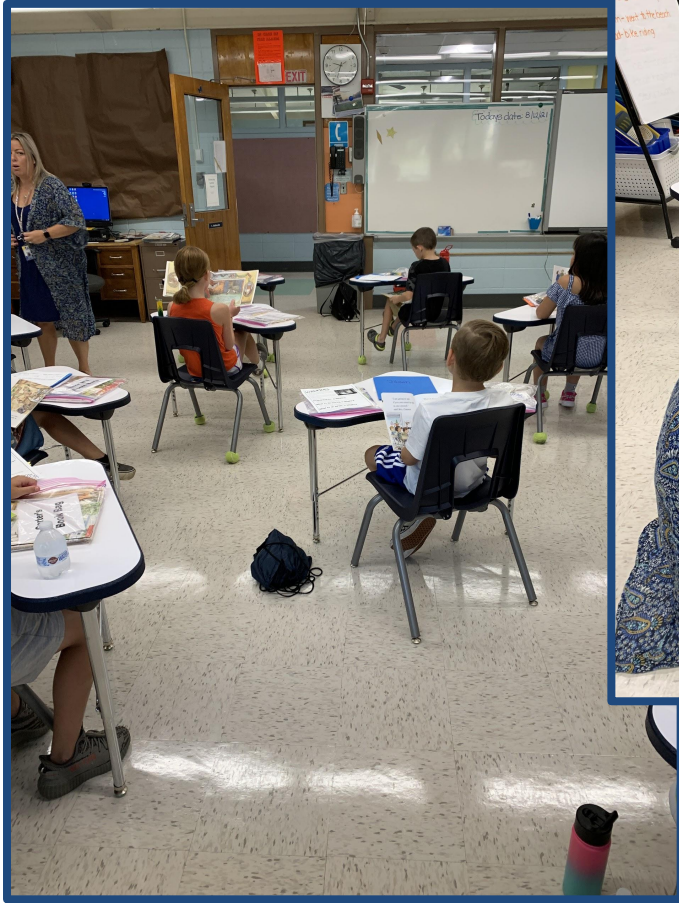


Elementary At-Risk Program

- Offered to rising Grade 1 through 6 students receiving Academic Intervention Services, students with 10 month IEP's, and ENL students
- Expanded this summer from two weeks to three
- Sessions each day for math and for reading support
- Provides students with a running start going into the new school year
- 150 student registrations



Elementary At-Risk Program





High School Advanced Placement Summer Program

- Provided to incoming Advanced Placement students in most AP course offerings
- Provides an opportunity for students to strengthen foundational knowledge prior to the start of new course work
- 13 Courses Offered
- 108 registered students



High School Advanced Placement Summer Program



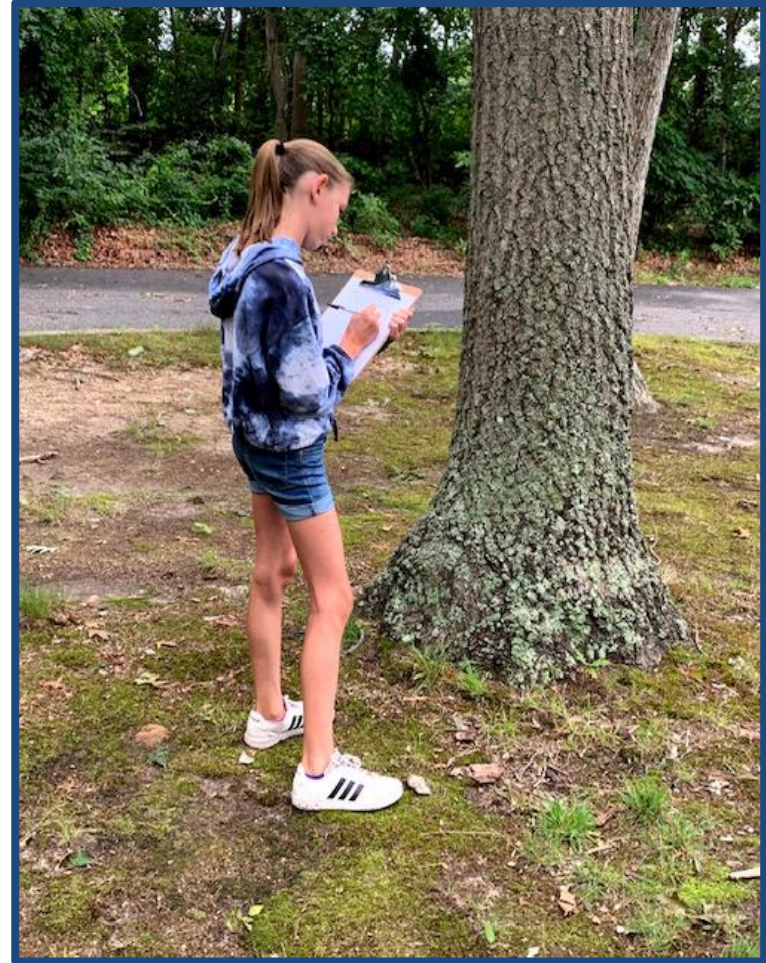


Secondary Science Research Program

- New offering this summer
- Provided opportunity for interested rising grade 7, 8, and 9 students to experience the research process and conduct hands-on experiments employing the scientific method over an abbreviated time period
- Conducted over a four week period meeting three times per week
- Enrollment: 19 registered students



Secondary Science Research Program





High School Peer Theater Program

- Provided an opportunity for students to learn, rehearse, and conduct a theatrical performance aligned with the structure of the regular school year peer theater program
- 19 students performed Willy Wonka and the Chocolate Factory on August 10th in front of an audience of approximately 50 community members



High School Peer Theater Program





Summer Enrichment and Remediation Program

- This newly created program, offered to students with needs, provided opportunities for remediation in math and reading alongside enrichment experiences in art, music, and physical education
- Limited the typical “summer slide” experienced most acutely by students in this population
- Enrollment: 30 registered students



Summer Enrichment and Remediation Program





BNL SPARK Program

- Offered virtually this summer, students from our high school science research program receive the opportunity to conduct research projects using BNL facilities and equipment
- Projects conducted use the synchrotron and spectrometry lab at BNL for conducting experiments
- Five of our science research students were enrolled in the program this summer



BNL SPARK Program

- Collaborative work creating group projects
- Investigated a comparison of elemental composition of wood and nails recovered from a shipwreck in the Long Island Sound (the HMS Sylph) and another from Lake Erie
- Student work focused on learning the function of the NSLS-II (Synchrotron), the type of spectroscopy that is performed at each of the beamlines used at the facility, and how to use the data analysis software associated with one particular beamline, TES

Discussion

- Although elemental differences were seen in all maps and samples, chlorine, phosphorus, and sulfur saw the most significant differences.
- Further research is required to ascertain the different affects these elements play in both the natural environment the samples were collected from, and the role they play in the redox reactions present in these samples
- Data analysis at different beamlines in the future may be required to analyze concentrations of iron and other elements of interest.
- A Major interest is located in the area of information that XRF could provide specifically in the element Fe

Data

CI_07_2 (freshwater):
Mean: 0.00610207
Total: 112.547
Standard Deviation: 0.0011

CI_10_1 (saltwater):
Mean: 0.00270449
Total: 67.0822
Standard Deviation: 0.0016

P_07_3 (freshwater):
Mean: 6.5463e-006
Total: 0.84273
Standard Deviation: 8.0251

P_10_2 (saltwater):
Mean: 8.96775e-005
Total: 1.54676
Standard Deviation: 4.90748e-005

S_07_3 (freshwater):
Mean: 7.87956e-005
Total: 10.1437
Standard Deviation: 5.40206e-005

S_10_2 (saltwater):
Mean: 0.00134317
Total: 23.1671
Standard Deviation: 0.000604808

Methods

Sample Collection

Fresh water samples were collected from an unnamed shipwreck in one of the great lakes. Where the salt water samples were collected from the HMS Sylph off of the coast of Long Island.

Sample Preparation

Samples are pieces of timber and metal pins from a ship that sank in 1815. Samples were prepared at Spectrum Petrographics as thin sections (30 um) mounted with superglue on Suprasil 2A quartz glass for XRF and XRD.

Beamline Specifications

007_1: 12umbeam2700eV x start, y start 21.000000 dwell time 0.200000	54.299999	007_4: 3umbeam2700eV, closedoutd x start, y start 21.530001 54.889999 dwell time 0.280000
007_2: 12umbeam4100eV x start, y start 21.000000 dwell time 0.050000	54.299999	010_1: 12umbeam4100eV x start, y start 20.200001 93.000000 dwell time 0.050000
007_3: 6umbeam2700eV x start, y start 21.299999 dwell time 0.280000	54.450001	010_2: 6umbeam2700eV x start, y start 20.200001 93.500000 dwell time 0.250000

Data Processing

The TES (Tender Energy X-ray Absorption) beamline was used to scan each sample for the elements that fit between the energy specification set prior to scanning.

Data Analysis

The IDL software was used analyze the way the different elements were present in each of the samples. Creating element maps was a way in which it was possible to get a visual comparison between the same element in saltwater and freshwater environments.



Summer Theater Community Programs Program

- Run through the district's Community Programs structure, enrolled students learn, rehearse, and conduct a theatrical performance
- This year the students in the program performed *Winnie the Pooh* (Grades 3-5) and *Circus, Circus* (Grades K-3)
- Enrollment: 25 students



Summer Theater Community Programs Program





Early Start Program

- Offered to selected incoming Kindergarten students to build comfort with the structure and routines of the Kindergarten classroom
- Program emphasizes foundational skills needed for a smooth transition to student's new school environment
- 15 students participated in the program this summer



Summer Roundout Program

- Offered each summer, this program provides students the opportunity to socialize and play
- Students participate in activities designed to build fine and gross motor skills and learn the importance of working together with others as part of a team
- Enrollment: 176 Students



Summer Roundout Program





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