



Youth Development Programs Final Report 2017-18



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Hudson River Community Sailing develops leadership and academic success in underserved New York City youth through sailing education and provides maritime education and recreation to the community at large.

Introduction

Hudson River Community Sailing serves 150 students from nine schools over the course of an academic year through Sail Academy. Students enter the program in the fall of their freshman year and over the course of four years they learn to sail, build wooden boats, and work as a team. In Sailing by Numbers, 9th grade students gain skills in math as they are introduced to sailing. 10th grade students in Ocean Literacy study the science of the Hudson and learn to become stewards of the river. First Mates, our 11-12th grade program, encompasses varied opportunities that enable older students to delve deeper into sailing, boat-building, and leadership opportunities. In the process, students receive academic credit, social-emotional support, and college and career preparation.

We operate Sail Academy in the context of a vibrant Community Sailing center that gives NYC affordable access to the water. The Community Sailing program also provides our youth with meaningful internships and connects them with diverse volunteers, career speakers, and mentors.

Sail Academy operates with four foundational outcomes, and we evaluate our work according to these outcomes as the goal. This year we have made several changes to the language we use to describe these outcomes, and to the measurements we apply to evaluate our success. These changes will be further detailed in the progress report below.

Sail Academy aims to:

1. Prepare students for success in college and career
2. Build leadership skills including self-confidence, communication, and teamwork
3. Foster a greater interest in STEM subjects and environmental stewardship
4. Develop student sailing and boat building skills

Our partner schools are:

1. Hudson High School of Learning Technologies
2. Landmark High School
3. Manhattan Business Academy
4. NYC Museum School

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5. NYC Lab School for Collaborative Studies
 6. Harvest Collegiate School
 7. James Baldwin School for Expeditionary Learning
 8. Quest to Learn
 9. Humanities Preparatory

We are currently assessing our partnerships for the upcoming academic year, and will report further on changes to this list.

Progress Assessment

In order to impact our students through our program, we must assure that we have satisfactory attendance and enrollment data. With this in mind, we have shifted our attendance entry to Salesforce, which enables us to capture attendance and enrollment data accurately and consistently, evaluate patterns weekly, and take follow up action. This allows us to serve our students better.

This year, an average of 117 total students attended program each week across the 4 years of Sail Academy. The average attendance rates for each program year are shown in Table 1 below, with a comparison to last year.

Average Attendance by Grade Comparison

Grade	Average Student Attendance Rate 2016-17	Average Student Attendance Rate 2017-18
9	72.75%	80.00%
10	69.76%	78%
11	69.41%	87%
12	71.36%	81%
Total	70.20%	82%

All four years of program show a substantial increase in average attendance rate as compared to 2016-17. Streamlined data collection, and the consistent evaluation of attendance data and subsequent contact with schools and students have enabled this change.

We made some additional changes to our assessment practices this year:

- We eliminated our “diagnostic” exams because we felt that they were not a useful tool in assessing program impact. We have instead instituted regular “exit tickets”, which are a short set of questions given at the end of most program days. Exit tickets range from content-driven questions to written personal reflection, and they give instructors a realistic understanding of how a given day’s instruction has impacted each student.
- We piloted the PEAR Institute Common Instrument Suite (CIS) Survey. This survey is designed to measure STEM interest and identity, and is currently being used in program years 2-4. (We are still awaiting the results of this tool, and are not yet able to report on them here).

We continue to partner with the Student Success Network, surveying our students at the beginning and end of each program year to measure growth in social emotional learning competencies. These surveys, in conjunction with our twice yearly internal survey, are used to measure our outcomes. Our internal survey is designed to measure progress towards all of our outcomes, providing some redundancy with the other measures, while also allowing students the opportunity to give instructor and program feedback.

Outcomes: Key Findings

Sail Academy students are more prepared for success in college and career.

During their time at HRCS, students are exposed to many unfamiliar career and college paths through the wide and committed network of adult volunteers and members.

This year, 100% of HRCS seniors were accepted to college, 88% are planning to attend a 4-year college or university, and 44% plan to major in a STEM field. (See Appendix for list of colleges and majors)

32 11-12th grade students received ongoing 1:1 coaching focusing on college choice, completing applications and financial aid forms, and SAT support using Khan Academy or referrals to Let's Get Ready

16 12th grade students participated in college essay workshops and 1:1 ongoing college essay and application support

32 11-12th grade students had the opportunity to visit colleges with HRCS, including: SUNY Maritime, Stevens Institute of Technology, NYU, Stony Brook, Columbia, and Baruch.

10 Career Speakers exposed 10th-12th Grade students to new careers and pathways including: patent lawyer, brand manager, and NYTimes software developer.

5 11-12th grade students attended a Mock Interview session with Google employees

38 10th grade students received training in resume writing

7 Students completed advanced intern training. Trainings focused on transferable job skills such as professional communication (phone, email), operations, bookkeeping, and database management. These students were then placed in departments based on their interests, where they continued more specific training, and joined the cadre of interns from the previous year in paid year round work.

13 Students participated in our Junior Educator Internship. This internship is a 4-week program where students act as instructors-in-training for our summer camp, City Sail. Students learn valuable communication and leadership skills, and teach a lesson of their own design. Students who did not choose to apply for this internship spent time in program researching job and internship opportunities that met their needs and interests.

100% of 1st year students signed up for a College Board account

100% of 1st year students surveyed agreed with the statement, "I am aware of the opportunities for me in the program if I decide to continue after this year."

100% of 11th grade students surveyed agreed with the statement, "I feel supported in exploring and preparing for opportunities for after high school (college, career, etc.)."

100% of 12th grade students surveyed agreed with the statement, "I am better prepared to succeed in whatever I decide to do after high school (college, career, etc.)."

67% of students from all grades (79% of students from 11th-12th grades) responded positively to statements about Problem Solving¹, 10% higher than the Student Success Network average².

"HRCS is the reason I have found my passion for sailing. HRCS opened the door to boating and sailing, and I have chosen my career path because of this." - Katherine Mattikow, rising 12th grade student, NYC Lab School for Collaborative Studies

"A basic skill I have learned is math and science because normally all jobs have to deal with mathematics so that will help me a lot." - Liandra Marin, rising 11th grade student, Manhattan Business Academy

Sail Academy develops leadership skills including self-confidence, communication and teamwork.

This year, we have added a leadership element to the 9th grade boat building workshop. In the workshop there is a student leader for each small group, responsible for projects and clean up assigned to that group. In 10th grade, students are often placed into small teams to build teamwork and communication skills with creatively solving problems. Students in grades 10-12

¹ "Problem Solving" is defined as "Ability to identify a problem, analyze possible plans to resolve the problem, select and implement a plan, and evaluate the outcome."

² Students were administered a pre-survey formulated by the Student Success Network and HRCS results was compared with 3,247 other students

serve as “first mates” on boats with 1st year students. Teaching younger students provides an opportunity for leadership, and more extensive work on interpersonal and communication skills.

100% of 9th grade students participated in 2 hours of leadership training connected to leadership styles and traits and how to develop leadership in the individual.

100% of Students learn teamwork when rigging and de-rigging sailboats, and communication skills by learning to tack and jibe using sailing commands

51 9th grade students applied for the Leadership Intensive summer internship, which focuses on leadership development, communication skills, and professionalism.

100% of students agree with the statement “By helping out and making contributions, I am able to make the program better.”

89% of 9th grade students surveyed agree with the statement “Because of the skills I have learned in program, I am more confident.”

97% of 10th grade students surveyed agreed with the statement “I communicate more effectively with others (peers and adults).”

100% of 11th grade students surveyed agree with the statement “I am a more effective role model to peers/students younger than me.”

100% of 12th grade students surveyed agree with the statement “I am a more effective leader within groups and a stronger mentor to younger students.”

100% of 10th-12th grade students surveyed agree with the statement “Because of the skills I have learned in program, I am more confident.”

55 students participated in an 8 hour First Aid CPR/AED training and receive a certification from the Red Cross.

9 11-12th Grade students planned and executed a 3 day overnight sailing cruise on the Long Island Sound.

79% of students from all grades (92% of students in grades 11-12) responded positively to statements about Interpersonal Skills³, 10% higher than the Student Success Network average⁴, and a statistically significant change from the beginning of the school year.

"I showed leadership today by raising the sails and steering and helping others who knew less than me about rigging a boat" -Alan Ramirez, Hudson High School of Learning Technologies

" I showed leadership by working with other students to decide which job people should do and getting pieces of the boat cut out" -Emma Ferrer, Manhattan Business Academy

"I no longer am scared of public speaking. I believe I have advanced because of a better community I have built." - Janice Jachero, rising 11th grade student

"I feel like I have learned a lot of teaching skills throughout my tracks, and I am so much more comfortable going through and explaining topics. I also have taken on many new roles in racing that I was really intimidated by before." - Gwentyth Klomfas, rising 12th grade student, NYC Museum School

"When I am out on the water and taking the role of skipper, I gain confidence over time to become a more effective leader." - Sean Brownlie, recent graduate of Quest to Learn High School

Sail Academy fosters a greater interest in STEM subjects.

³ "Interpersonal Skills" is defined as "Ability to clearly communicate one's thoughts, be aware of one's own communication style and those of others, and be empathetic."

⁴ Students were administered a pre-survey formulated by the Student Success Network and HRCS results was compared with 3,230 other students

By creating connections between what they are learning on the water and in the classroom, students become excited about math and science. This year, we implemented the use of exit tickets, which acted as a formative assessment of content mastery for 9th and 10th grades. However, our key goal remains to increase student interest in these subjects, with content mastery as a secondary goal.

9th Grade students focus on math concepts related to sailing and boat building, introducing them to our focus of applied STEM concepts. Students are taught how to read technical documents associated with boat construction, and use fractions in the workshop. During the sailing season, students learn how to convert units of measurement such as boat and wind speed.

96% of 9th grade students earned an average of 2 (out of 3 points) or higher on exit tickets.

81% of 9th grade students earned at least one credit in program this year.

82% of 9th grade students surveyed agree with the statement, " I better understand how to apply math to solve problems."

10th Grade students study Marine Ecology and Water Quality, Marine Debris, and Meteorology. They gather data weekly on weather, water quality, and marine debris. Students use computer simulations to analyze the effects of ocean currents on debris, and brainstorm possible solutions.

96% of 10th grade students earned an average of 2.5 (out of 3 points) or higher on exit tickets.

11 10th Grade students visited the Newtown Creek Wastewater Treatment plant, where they studied how New York gets water and deals with waste.

78% of 10th grade students earned at least one credit in program this year.

97% of students surveyed agreed with the statement “I have a better understanding of science concepts related to sailing and marine life.”

11-12th Grade students are offered 4 tracks to choose from: Sailing, Building, Exploring, and Racing. Each track delves deeper into an area that students have experiences in previous years of program, such as sailing, boat building, and navigation skills.

12 11-12th Grade students participated in the Building Track, where they completed a wooden Windmill boat after several years of student work on the project.

50% of 11-12th grade students responded positively to statements about Academic Behaviors⁵ in the spring survey, as compared to 30% in the fall. The Student Success Network average remained constant throughout the year at about 30%.⁶

“Calculating and planning a logical sailing course requires a deep understanding of angles and geometry” - Anonymous rising 10th grade student

Sail Academy students develop sailing and boat building skills.

Students progress through a tiered set of skills and earn certifications along the way.

54 Students have completed at least 75% of sailing skills checklist

53 of 56 students passed the NY State Safe Boating Certification

75 students participated in an 8 hour expedition from Pier 66 to Fort Lee park

⁵ “Academic Behaviors” are defined as “Ability and tendency to ask for help from peers and adults, [combined with] a cyclical learning process, in which a learner plans for a task, monitors performance, and then reflects on the outcome in order to prepare for the next task.”

⁶ Students were administered a pre-survey formulated by the Student Success Network and HRCS results was compared with 3,036 other students

45 Students participated in an 8 hour expedition to Liberty State Park

55 9th grade students completed 30 hours each of on-water sailing

60 students spent 20 hours each building two wooden Optimist sailboats after learning to safely use tools such as saws, drills, and files.

100% of 10th grade students have completed at least 3 hours of instructor-led small motor boat training. This year we have improved our training process, adding in more formal instructor-led sessions

6 Students earned a US Sailing Basic Keelboat Certification through their work in the Sailing Track.

2 Students are currently pursuing their Student Skipper Certification, which allows them to operate a boat without a staff member.

"The two most important things I have gotten out of program are learning more about sea life & learning to sail a boat" - Sade Carter, 2nd year student, James Baldwin School

Conclusions

This year, we made several program-wide changes that positively impacted programming. We planned and executed a series of three Youth Development Trainings, which provided an added level of support to all staff and volunteers working directly with students. Sessions occurred in September, January, and April. These trainings focused on educational theories, relationship and rapport building, social emotional skill building, and content delivery. Feedback from participants was overwhelmingly positive according to surveys given at the end of each session, and program directors noticed a higher level of student-staff interaction.

Another initiative this year has been to increase student voice. We partnered with the Student Success Network and included two of our students in a Student Advisory Council where they met several times throughout the year with members of the Student Success Network Staff and our staff to develop "change ideas" that they would like to see implemented

in program. We intend to continue this partnership in the fall, as well as expand our own internal opportunities for student voice.

Although we experienced growth in attendance rates this year, and collected better attendance data, we also saw lower enrollment numbers, particularly in the 9th grade. Attendance and more so, attrition, will remain an area of improvement for program. Working on innovative solutions to the problems of students attending inconsistently and dropping out of program will be a potential area for growth next year. While we have made an effort to contact students and parents directly and consistently (as opposed to using mass-communication services like email and call-em-all as we have in the past) maintaining communication is still a struggle and will be key to combating attrition in the future.

This year in Sailing by Numbers, students learned the basics of sailing a J24 sailboat, leadership concepts, and methods for measuring out parts and building an Optimist sailboat. Most students who completed the year showed interest in continuing the program by applying to our Leadership Intensive. We met this interest by doubling the number of sessions of leadership from two to four, allowing for 40 students total to participate. We did more work in explicitly teaching leadership concepts, which helped students understand leadership is shown in many ways and that there is a definite strategy and approach to developing leadership in oneself.

The academic curriculum for Ocean Literacy in its third year is finally at a point where it is fairly replicable. While there are still challenges to certain parts of the lessons, the content feels streamlined and the sequence follows a natural progression.

First Mates saw a significant change to program structure this year, with all of the tracks moving to a full school year schedule. This provided continuity and consistency for students, and created fewer transition points. The 11th and 12th grades demonstrated strong attendance averages, but low 11th grade enrollment numbers, although many of the 11th grade students who attended program were attending more than one track (and sometimes up to three). The attrition rate from 10th to 11th grade remains an area of improvement for us, because the lure of academic credit is no longer available, and many students become increasingly busy in their junior year.

Overall, the evidence above demonstrates success in each outcome across the four years of Sail Academy. One area that we would like to improve upon is the fourth outcome: Sail academy students develop sailing and boat building skills. We spent significant time this winter updating our sailing skills checklist in order to provide a tool that will better support both

students and instructors. We also updated our dinghy training policy and procedures, so that there are now fewer total hours of training required for each student, but more hours of direct instruction with an adult are required. This has led to the practice of better habits among staff and students, and a smoother checkout process. We will continue to develop plans for changes in these areas, some of which are outlined in the section below.

Looking Ahead

In the coming program year, we will be changing our schedule to address some of the information that we gathered this year, as well as support new initiatives. Sailing by Numbers will be three days per week instead of four. Due to the differing school schedule on Wednesdays, when many of our students have a half day, we saw extremely low attendance this year. We implemented a change in the winter to an earlier Wednesday program day to accommodate this schedule, but did not see an increase in attendance. In order to maximise our resources, we have decided to eliminate Wednesday program in the coming year. We do not anticipate this causing an overload of students on other days, as we intend to enroll an equivalent number of students next year. We also plan to revise our recruitment practices such that we have a more equal distribution of school representation in the first year of program.

In evaluating the attendance and attrition data that we collected this year, as well as qualitative data through observation, we have identified parts of our curriculum that we would like to improve upon. Safe boating will no longer be part of the winter curriculum for Sailing by Numbers, but will be added as an additional enrichment day for students to complete all 8 hours at once. This will increase our opportunities to teach other relevant and more engaging subject matter during program time. We also plan to develop our math curriculum further to include more opportunities for creative problem solving.

Winter continues to be a challenging time to keep students engaged students in Ocean Literacy, but adding in more sailing skills review was helpful this year so that students were prepared to go out on the water in the spring. We would like to formalize this part of the curriculum more for the coming year, which will help with our goal of improving upon our sailing skills instruction as a program wide outcome.

The Ocean Literacy winter project, the Marine Debris Advocacy project, was successful in that students took a lot of initiative and were very engaged in the process of making our final

video. However, the last few weeks were rushed. This project will be started earlier next year so that there is more time for students to engage with and develop ideas independently.

Shortening the total amount of training required to earn a dinghy certification has made that goal much more accessible, but students expressed throughout the year and in the end of year survey a need for a more consistent way to practice those skills to get to the point where they are actively ready to drive the dinghy independently. That time will be built into program next year with the help of a designated dinghy trainer using the old grey dinghy (potentially rising juniors who need to meet volunteer time).

As stated above, the track schedule this year ran more smoothly with the new rule of school year long tracks for each area. The Explore track was able to move past the one-night trip to advanced navigation skills and the planning and execution of a two-night trip, and the Racing track winter programming was a highlight for students, teaching valuable higher level teambuilding and communication skills. While it is extremely valuable to have our full time staff from other departments teach tracks, it remains an area of growth to have consistent planning of track curriculum with enough time to implement each track to the best of our abilities. We put in place more check ins with track leads this year, but will continue to add points of communication and time set aside for planning.

Several 11-12th grade students who have left the program have also voiced that they would like to pick a day to come to program and have multiple options open to them on that day. To that end, as well as to maximize resources, we will be working on changes to the track schedule that will create points of overlap between different types of programming. This will also provide an opportunity to lead larger group college access lessons, which was less feasible this year because most of our 11th grade students were coming several days a week, and therefore would be at different parts in the curriculum.

Inwood Expansion

This year, we made a significant change to our youth programming by extending to our second location in Inwood. HRCS seeks to create a new community sailing and youth development program at Dyckman Marina that will serve local schools, youth organizations, people with disabilities, and the general public. Building on a record of success in Chelsea and strong support from neighborhood stakeholders, this program will be a transformative,

replicable model for early intervention, leadership development, and STEM education, powered through a sailing-based platform.

In April, we launched a pilot program at the Inwood middle school Salomé Ureña with 15 students. Applying lessons learned, the model and school partners will be solidified, and the program will officially launch with 25 students over the 2018-19 academic year. The goal is to provide year-round, long-term youth development programming that will offer academic enrichment and support to help students succeed as they transition to high school and beyond. By 2020, HRCS will deliver a three-year STEM enrichment, sailing, and social emotional development program for 75 students. In addition to academics, students will develop job skills and be eligible for paid part-time internships.

Program Highlights

Explore Track Overnight Trips

After completing a one night overnight trip in the fall, the Explorers planned and executed a two night overnight trip this spring on Long Island Sound!



First Year Fall and Spring Expeditions

75 students participated in the fall expedition to Fort Lee Park. Students created trip plans, practiced anchoring, and went on land for games, warm beverages, and a nature scavenger hunt. 45 students participated in the spring expedition to Liberty State Park, the final

celebration for the first year of Sail Academy.

Winter Racing Track

Director of Community Sailing Don Rotzien led the Winter section of the Racing Track, which focused on game theory, communication and leadership development, and land-based drills.



Second Year Trip to Newtown Creek

11 Students visited Newtown Creek Wastewater Treatment Plant on a 5 hour trip to study how New York gets its water and deals with its waste.

Irvington Overnight Trip and Beach Cleanup

3rd and 4th Year students completed the tradition of the overnight sail to Irvington, where they stayed on boats and in the beach club, and helped to clean up a nearby beach!



Return to River



Students showed off their winter projects. First year students blessed and launched two wooden Optimist boats, while third and fourth year students blessed and launched the wooden Windmill boat that was years in the making. Second year students displayed a video on marine debris that they scripted and filmed as team.

Alumni

We sent out care packages to Sail Academy alumni of all years during midterm season this winter. In addition to providing support for these students, this initiative also increased the participation rate for our Alumni survey.

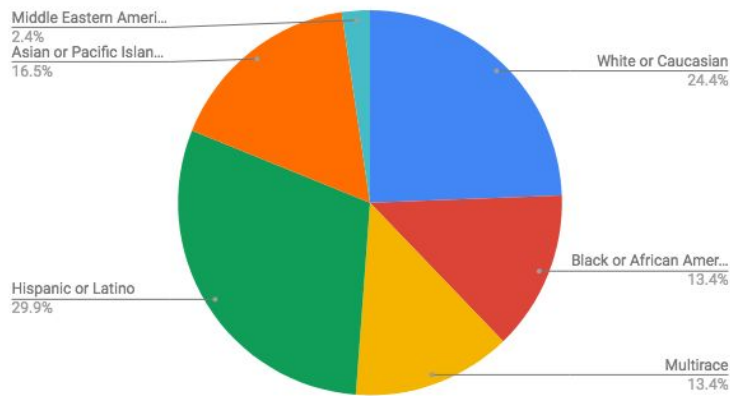
This spring Sail Academy graduates Anthony Velez and Leo Martinez joined our year-round staff. Both are primarily working in the operations department, with additional responsibilities in youth development.

Our first cohort of Sail Academy students began graduating college this past spring. We have started collecting data on college persistence, and aim to expand our data collection and

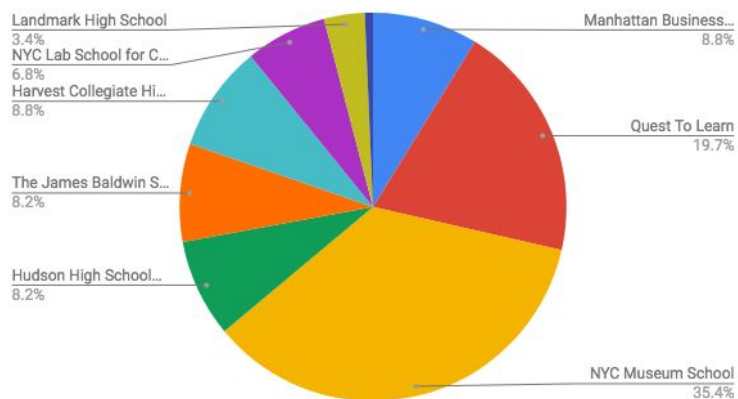
college persistence programming. We hope to begin reporting out more thoroughly in next year's report.

Appendix

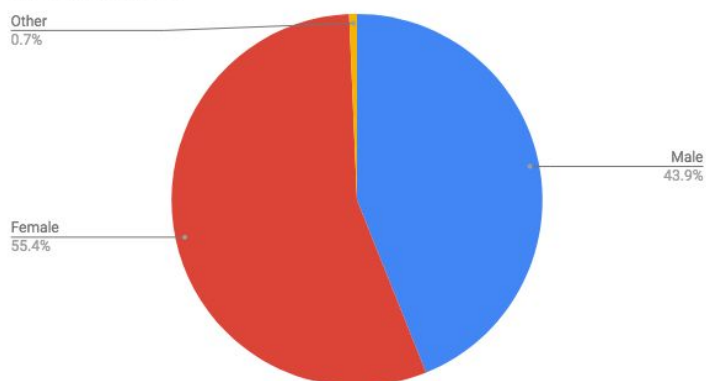
Student Ethnicity



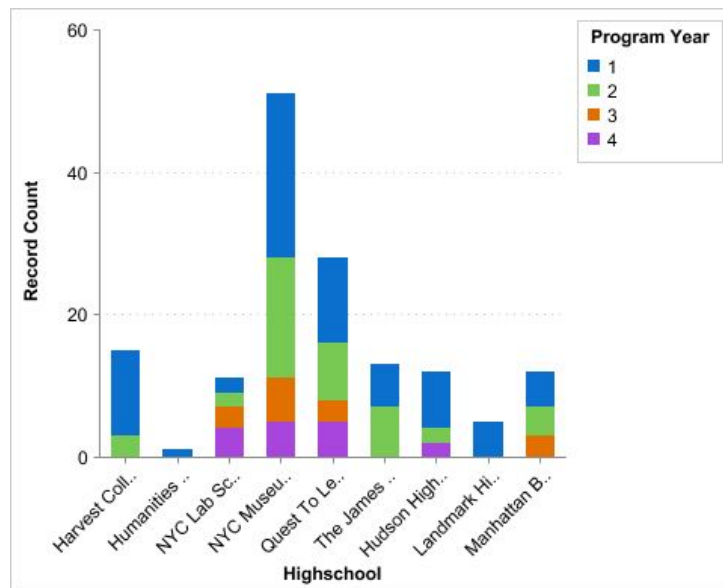
Student Highschool



Student Gender



Enrollment by Year and High School



Credit Earners

Students who qualified to earn at least 1 credit in Math, Science, or Physical Education (Attended for 54 hours or more)

Overall	Total	9	10
Percent	80%	81%	78%

Seniors Postsecondary Plans

First	Last	Postsecondary Plan	Area of Interest
Fabian	Aguilar	City College	Undecided
Dario	Arias	Hunter College	Computer Science
Sean	Brownlie	Fashion Institute of Technology	Film
Matthew	Cafaro	Mohawk Valley Community College	Cybersecurity
Daisy	Chung	Hunter College	Undecided
Gabriella	Kassel-Torres	The New School	Undecided

Anna	Liang	Stony Brook University	Pre Med
Jonathan	Ma	Brooklyn College	Undecided
Nailah	Malik	City College	Undecided
Nate	Russo	Swarthmore College	Engineering
Alexander	Salvari	Airforce	Cybersecurity
Max	Sano	Franklin & Marshall College	International Relations
Nicholas	Tanzosh	SUNY Maritime	Undecided
Florence	Tran	Stony Brook University	Undecided
Gina	Yung	Hunter College	Pre Med
Gloria	Yung	York College	Occupational Therapy

Sail Academy by Year

Grade	Name	Scope and Schedule	Content
9	Sailing by the Numbers	4x/month, 2 hr/session	Discover how math applies to sailing, navigation, and boat building. Earn a math or PE credit.
10	Ocean Literacy	4x/month, 3 hr/session	Study the science of the Hudson and learn to become a steward of the river. Earn a science and PE credit.
11/12	First Mates	4x/month minimum, 3 hr/session	Become a stronger leader and sailor, prepare for college, gain job skills, and receive 1:1 counseling. Earn a sailing certification.

Grade 11/12 Tracks

Sailing	Racing	Exploring	Building
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Sailors focus on not just honing their own seamanship skills, but also passing on this knowledge and these skills to their younger peers by assisting in the first year program.	Racers will learn the skills and tactics necessary to compete at a high level against peers and adults.	Explorers venture beyond their home waters, and live aboard as sailors have done for generations, learning navigation, safety, and cruising skills.	Hearkening back to the glory days of sail and wooden boat construction, the craftsman focus on the classic, and often overlooked, skills and techniques around wood-working.
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Internships by Year

Name	Time Frame	Students Served	Schedule	Content
Leadership Intensive	Summer 9/10	40	1 week, Mon-Fri, summer, lunch and transit stipends	Leadership, effective communication, team coordination.
Junior Educator	Summer 10/11	8-10	4 weeks, Mon-Fri, summer, lunch and transit stipends	Basics of instruction, working in the office
Office/ Waterfront	Spring, Summer, Fall 11/12	5 - 8	Weekly schedule during sailing season, 10-20 hrs/week, paid	Customer service, boat repair and maintenance, office management. dinghy operation.
Apprentice	Spring, Summer 12th and after Graduation	5 - 8	Weekly schedule during sailing season, 20-30 hrs/week, paid	Assistant instructor on public sails with adults and families. Independent boat repair and maintenance tasks.

Key Staff and Volunteers

Grade / Name	Program Coordinator	Supporting Staff	Volunteers
9 - Sailing by the Numbers	Mwenye Seville	Jacob Blair	Thomas Mueller, Janine Hamilton, Peter Mant, David Florence, Hart Uhl, Janine Haberl, Dianne Neyens, Keith Manyin, Justin Ryan, Nick Badal, Elizabeth (Lizzy) Redlich, Susan Shockett
10 - Ocean Literacy	Alexe Taylor	Will Culver	Mary Marino, Rupert Murray
11/12 - First Mates	Emily Moffat	Chris Green, Robert Burke, Jonathan Mercado, Alexe Taylor, Don Rotzien	Rupert Murray, Michael Kurtz, Len Thompson, Nate Carver