STEMteachersNYC

Science • Technology • Engineering • Math

STEMteachersNYC ANNUAL REPORT PROGRAM YEAR 2019-2020

FOR TEACHERS, BY TEACHERS, ABOUT TEACHING

STEMTEACHERSNYC.ORG @STEMTEACHERSNYC

WHAT TEACHERS ARE SAYING

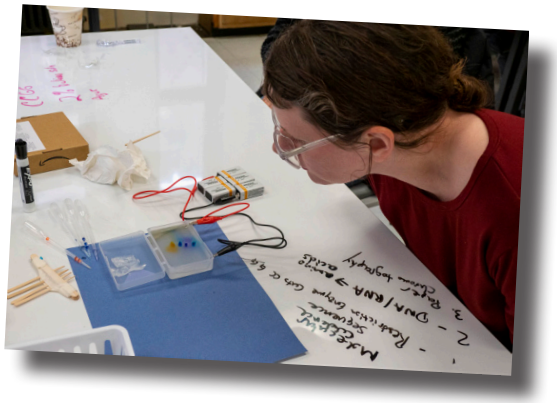
“Sometimes I feel like other workshops don't apply to my population of students. This was right on the pulse."

“It was actually one of the few workshops where I felt really comfortable online and didn't feel depressed that we couldn't be in person!"

“The instructor has deep, first-hand experience of the topic being discussed.”

"I plan on applying all of the lessons I learned from this workshop into my content area."

“...a highly interactive, blended active learning experience with personalized attention from an experienced peer instructor... I had a great time!”



"I loved that the presenters are current teachers. They know what's realistic, they understand the restraints, and they have a real understanding of the different grade levels. And our four presenters were especially fantastic: creative, supportive, helpful, knowledgeable…"

"…being taught by teachers and learning alongside teachers increased the connections I was able to draw back to things we actually do in the classroom."

"It was an extraordinary experience. It was tailored to the various levels of expertise which made us feel comfortable to engage."

"All of the teachers from our school who attended the workshop are currently turn-keying what they have learned to the rest of the department."

"The leaders were teachers like me. They have been where I am now."

PRESIDENT'S VISION FOR THE FUTURE

Established in 2011, STEMteachersNYC has built a highly innovative organization which continues to blaze a trail for teacher-led professional development and for an integrated model of teacher-leader growth. We have become a well-known leader in New York City and the Tri-State area, an organization teachers, principals and administrators turn to for high quality professional development in the sciences, engineering and applied math, and one in which funders concerned with STEM education invest.

2020 has presented challenges unique to the STEM teaching community. In response to the COVID-19 pandemic, in April we launched an intensive effort to develop leader expertise in on-line instruction and redesigned the summer 2020 workshops for the virtual context. 15 teacher-leaders attended 8 intensive leader development "huddles", all of whom were preparing to lead summer workshops. The result was 12 strong, interactive Summer STEM Institute workshops in July and August, which attracted 181 attendees, 81 of whom teach in Title I schools. We granted 28 summer scholarships, kept the teacher price at last year's level, and were able to offer our Dimensions of Culturally Responsive Teaching in STEM workshop twice, for no charge, due to grant funding from the Pinkerton Foundation. In addition, we returned to our roots and expanded our working group catalog to 8, including EcoSTEM, K8 Math, Elementary STEM, DataSTEM, Bilingual STEM, Blended and Hybrid Teaching and Learning, Chemistry, and AP Physics. Over the summer, 144 teachers participated in these working groups, for which we did not charge.

Our work over the summer allowed us to expand the work of our CRT Task Force and deepened our commitment to culturally responsive teaching in STEM and envision becoming a national leader in developing classroom practitioners who integrate these practices into their teaching. Our innovative approach to elementary science is attracting national attention and funding, and we are committed to developing it further. We continue to evolve innovative strategies for organizing our growing community of teachers around themes of mutual interest outside of workshops. This community of practice is one of the most important forums we offer in a profession that is often isolating and where dedicated teachers are hungry for colleagues with whom to discuss their classroom challenges. We expect it to grow and diversify.

We now have a core of experienced leaders trained in how to present participatory workshops virtually, and envision formalizing our leadership training program around our Framework for Teacher-led Professional Development, to increase the reach of our own programs, to bolster sibling teacher-led organizations around the country, and to strengthen a model of teacher-led professional development by teachers within their own schools.

We envision breaking new ground in STEM pedagogy and research through continued partnership building with high-quality local, regional and national organizations. In addition, we are committed to rigorous internal assessment of our own programs as a platform for improvement and growth.

As our programming expands, our management and governance will expand with it. The staff will grow and transition away from

volunteer leadership. The board will continue to add non-teacher members to expand the pool of expertise and support. We expect to add to our already dynamic list of individuals, foundations and corporations who support our work with new philanthropic partners and increased support from existing partners.

In the coming years, expect our workshops to be offered in virtual, face-to-face and blended formats while retaining the interactivity and personalization and strength of content and pedagogy that set us apart. Expect us to integrate computational thinking and data science into our workshops. Expect us to strengthen our focus on elementary and middle school while expanding our focus on the traditional sciences to further embrace engineering, cross-disciplinary subjects and new pedagogical techniques. Expect us to continue to build a library of on-line, teacher-tested tools available to teachers everywhere along with a set of workshops focused on how to use these tools most effectively. And expect us to stay true to our mission of excellence in professional development for teachers, by teachers, about teaching.

STEMteachersNYC is a dynamic network of many committed people – staff, workshop leaders, teacher-participants, professional learning community members, board, philanthropists – which give it the strength to envision an ambitious future. I want to thank everyone involved for their commitment to our work together.

Fernand Brunschwig
President, STEMteachersNYC

THANKS TO OUR SPONSORS

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THE JAFFE FAMILY FOUNDATION

100KIN10 ANSWERING THE NATION'S CALL

The Pinkerton Foundation

New Visions for Public Schools

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THE GILDER FOUNDATION

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PROGRAM 2019-2020 "AT-A-GLANCE"

STEMteachersNYC TOTAL PROGRAMS & ATTENDEES FOR PROGRAMMING YEARS 2018-2019 AND 2019-2020			
		2018-2019	2019-2020
FALL	Total Workshops	7	10
	Additonal Free Programs	0	3
	Fall Attendees	161	206
SPRING	Total Workshops	15	9
	Additonal Free Programs	1	23
	Spring Attendees	286	330
SUMMER	Total Workshops	10	12
	Additonal Free Programs	0	8
	Summer Attendees	133	325
	TOTAL ATTENDEES	580	861

SUMMER STEM INSTITUTE SCHOLARSHIPS

INCREASED 80%

- Expanded from 5 in 2019 to 28 seats in 2020

TOTAL TEACHERS FROM TITLE 1 SCHOOLS

OVER 55% OF TEACHERS

- 81 of 181 summer teacher attendees worked at schools where 40% of students receive free/reduced

CAMP PROGRAMS

INCREASED 60%

- Expanded from 3 students in 2019 to 8 students in 2020

INTERNSHIPS

INCREASED 65%

- Expanded from 4 in 2019 to 12 in 2020

OUR COMMUNITY

TOTAL ATTENDEES TO DATE

5,592 TEACHERS

TOTAL ATTENDEES TO DATE

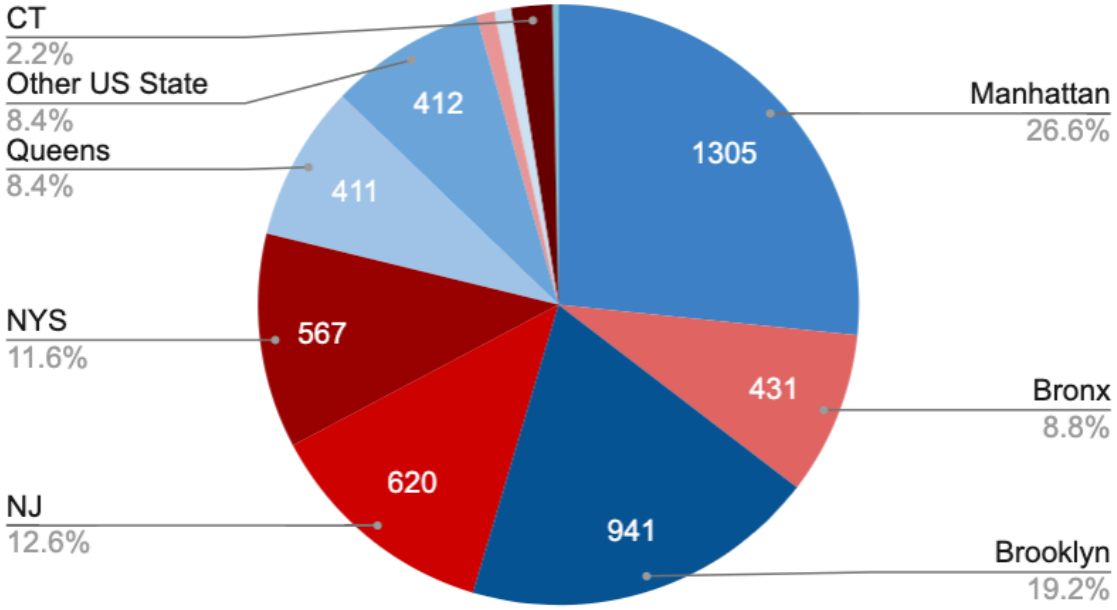
1,470 MEMBERS

TOTAL PROGRAMS TO DATE

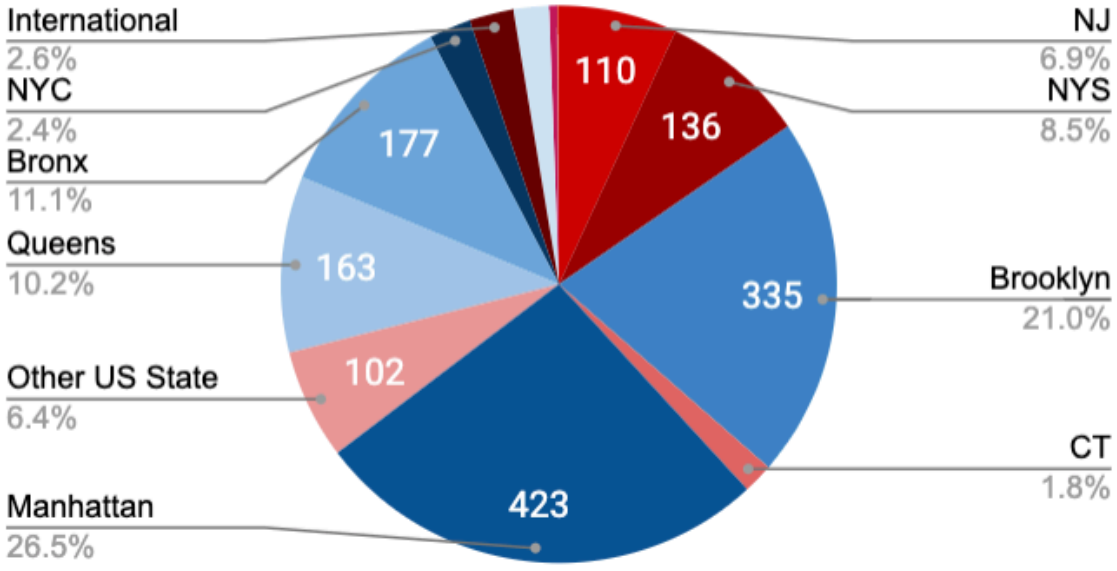
252 PROGRAMS

OUR REACH

Location of STEMteachersNYC Participants 2013 - 2019



Location of STEMteachersNYC Member Schools 2011-2019



PROGRAM HIGHLIGHTS 2019-2020

School Year Weekend Workshops

Our fall 2019 season saw new workshops that truly integrated STEM content and pedagogy, like our Computational Modeling with Javascript workshop and our Velocity and Evolution series. We returned to our origins as a grassroots organization built on the ideas, needs and experience of teachers through a new set of working groups like MakerSTEM, EcoSTEM, Elementary STEM and others. And we formed new partnerships with Scratch and with the NYCDOE Office of Sustainability. New program formats included a new initiative from our Consilience team in the form of a Consilience in Environmental Science Reading Club, targeted to both STEM and non-STEM high school teachers.

2020 COVID-19 STRATEGIES

Workshop Teacher-Leader Huddles

Adapting workshops to responsively meet new needs of the community

STEMteachersNYC workshop leaders worked carefully and intentionally as a team, to transform our workshops to the virtual space. This enabled us to maintain the pedagogy-rich, deep dives into topics like Standards-Based Grading, Unit Planning, Cultural Responsiveness, and even Engineering, and their immediate, practical use in planning and classroom teaching. We integrated Technological Knowledge into our approaches to Pedagogical Content Knowledge, as well as new, relevant engagement tools. We listened to the community, and over the course of eight weeks modified and adapted our workshops to better meet teachers' new needs.

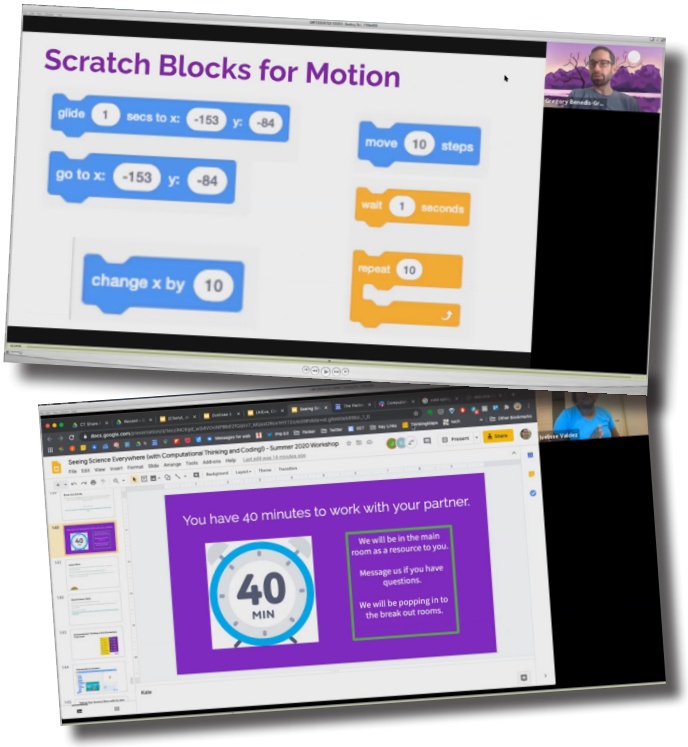
Free Open Support Sessions During Lockdown

Hearing from our teachers, supporting new needs and challenges

STEMteachersNYC saw an immediate need to open up space to share the new challenges of shifting to virtual teaching. We offered weekly, grade-specific live community support sessions, to listen to how teachers were finding new ways to communicate, plan, teach, engage, and assess. This was also a space to hear about what was working well, and what specific online tools teachers wanted to learn more about to support their teaching.

Free Special Events & Virtual Teaching Resources

STEMteachersNYC listened to our members! After hearing from many teachers about current needs and what was working, we focused our efforts on a series of tool-focused free virtual sessions. Each session presented ways to get comfortable with an online teaching tool, the scope of what is available, ease of integration with current teaching platforms, a short hands-on trial, and Q&A. All but one session was recorded and made freely available on our new Virtual Resources page on our website. Sessions included: Live Discussion with Neil Shubin, SageModeler, Pivot Interactives, Physics Aviary, Origami Organelles, Engineering with Paper, and Teaching Climate Change.



Summer 2020

This past summer our core offerings broke new ground with Advanced Level Standards Based Grading (SBG) and Growing Your Modeling Practice. Our core offerings of Unit Planning and Curriculum Development with NGSS, Seeing Science Everywhere (SSE), and SBG saw consistent attendance. New workshop content and offerings included the integration of computational thinking into elementary STEM (SSE), a complete redevelopment of the work of our Culturally Responsive Teaching Task Force in our Dimensions of CRT STEM, as well as establishment of a regular Consilience in Environmental Science Reading Club.

Mid-Summer and Ongoing Working Groups

Returning to our roots with a focus on subject group needs.

- K8Math - Outdoor and home-based adaptations and resources.
- AP Physics - Discussion on kits for class and home, and incorporating video launches.
- Chemistry - Home-based lab equivalents, home lab safety and liability considerations.
- EcoSTEM - Reunion of alumni, discussion of outdoor teaching, shared eco focused project and problem based learning.
- DataSTEM - Affordable sensors & kits, scaffolding data literacy and skills.
- Elementary STEM - Needs specific to younger students around hands-on home activities, engagement, scheduling and support.
- Blended/Hybrid Teaching and Learning - Building community and engagement, SEL supports, teacher self-care, family connections.
- Bilingual STEM - Resources and strategies appropriate across languages taught.

Youth Programs

High School Internships

- This year we continued to offer several internship and camp programs directed at high school students, to bring together local and international students around STEM topics, design challenges, and a focus on understanding how educational nonprofits function.
- 12 Students participated in the three internship programs with a focus on understanding the operation of educational nonprofit organizations and education research, including a five-day intensive Thanksgiving program, a five-day intensive Spring Break program, and a four-week Summer Education Research Internship.

STEM Camp

8 local and international school students participated in the STEMteachersNYC STEM Camp 2020. During the three-week long STEM online camp, students engaged in and learned skills relevant to multiple STEM subjects, from microbiology to Javascript, through authentic, student-guided, project-based work, supported by expert educators in each field.

New Leader Pathway

Spring and summer 2020 saw 7 new leaders emerge; the process involves attending a workshop as an active participant, joining the current leader team to debrief and co-design, use in classroom and subsequent incorporation of classroom experience, co-facilitation and independent leading of a workshop.

Internal Program Assessment Notes

This year we took a closer look at the ten different workshops offered during STEMteachersNYC Summer STEM Institute 2019, through participant comments before and after their experience. Overall, teachers had overwhelmingly positive feedback about the value and effectiveness of STEMteachersNYC professional development workshops.

Expected Learning Outcomes	Reported Learning Gains
• Teaching Strategies • Better understanding of the NGSS • Ready-to-use resources	• Teaching Strategies • Ideas around student engagement • Ready-to-use resources

ASSESSMENT FINDINGS

- Teachers came away with relevant, student-centered teaching strategies, classroom-tested, ready-to-use resources.
- STEMteachersNYC workshops are meaningful and effective because of teacher leaders' expertise and experiences.
- More than half of respondents are applying what they learned in varied and creative ways in K-12 classrooms.
- More than 95 percent of teacher respondents agreed that the workshops increased their understanding and confidence in teaching STEM concepts and strategies.
- Teacher leaders are attuned and responsive to the current needs of STEM teachers.

> *"Being taught by teachers and learning alongside teachers increased the connections I was able to draw back to things we actually do in the classroom. Often, PD leaders suggest things that aren't actually doable in the classroom – either the activities require too much time or materials or prerequisite understanding. Having active teachers lead the PD meant suggestions were attuned to the needs of today's classrooms."*

Participant, Introduction to Biotechnology, Summer STEM Institute, 2019

STEMteachersNYC Donors 2019 - 2020

We are grateful for the new and continued contributions from our donors.

$25,000 and above

Blanche T. Enders Charitable Trust

National Center for Civic Innovation

100kin10

$10,000-$24,999

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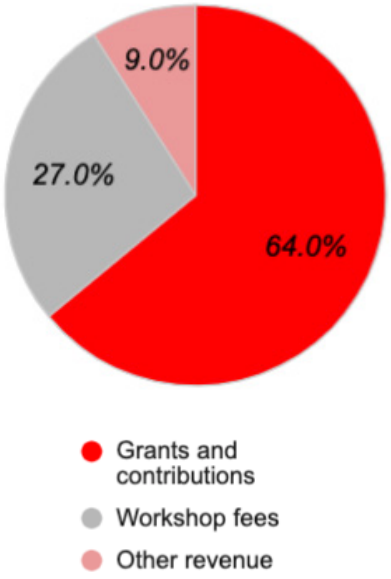
Financial Results

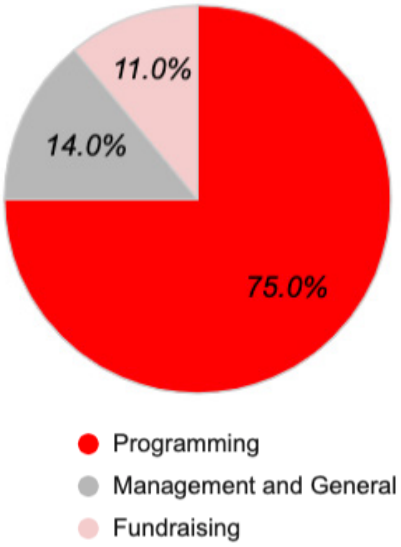
REVENUES 2019

CATEGORY	AMOUNT
Grants and contributions	$160,181
Workshop fees	$69,527
Other revenue	$24,338
TOTAL REVENUES	**$254,046**



EXPENSES 2019

CATEGORY	AMOUNT
Program	$201,629
Management and General	$36,527
Fundraising	$29,444
TOTAL EXPENSES	**$267,600**



NET ASSETS 2019

Net Assets at Beginning of the Year	$283,387*
Net Assets at End of the Year	$269,833*

*includes restricted grants for future year expenditure

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OUR MISSION

STEMteachersNYC is a nonprofit organization dedicated to supporting a community of STEM teachers across the NYC region. Our mission is to cultivate excellence in STEM teaching and to promote deep understanding and success for students through innovative, teacher-led professional development. Our weekend workshops are offered during the school year and multi-week workshop intensives occur in the summer, led by master teachers.

WWW.STEMTEACHERSNYC.ORG
INFO@STEMTEACHERSNYC.ORG

"It really was for teachers by teachers. I felt supported, validated, and encouraged."

"This was my third STEMteachersNYC teacher-led workshop. I found it to be engaging and informative and practical. It changed how I think about teaching"

"For teachers, by teachers, about teaching."

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