STEMteachersNYC

Science • Technology • Engineering • Math

PROGRAM REPORT
SUMMER 2017

SUMMER 2017 HIGHLIGHTS

This summer was truly transformative. In total we engaged 189 STEM teachers from around the country and world in excellent STEM teaching workshops exploring a range of topics such as mechanics, chemistry, electricity and magnetism, computer science, and biology among others.

Our first offering of the summer, Standards-Based Grading, co-led by Mark Schober and Manjula Nair was very successful with full enrollment, and a cohort of teachers who are now implementing innovative assessment strategies in their classrooms. The Introduction to Modeling workshop was also at capacity with high school and middle school teachers from around the region learning how to integrate modeling instruction into their classrooms. Michael Crofton returned to NYC this year to offer a 3-week advanced course in Electricity and Magnetism Modeling, engaging teachers with previous modeling experience. And our first Biology Workshop Intensive was a big success, generating a great deal of enthusiasm and a new Biology steering committee with a planned reunion this October.

In all, our survey data showed that nearly all participants agreed our workshops were engaging, and the content was clear. Over 90% of participants also agreed their workshop encouraged reflective conversations with other participants, that they will incorporate what they've learned in their own classrooms, and are eager to participate in upcoming workshops.

QUICK STATS: SUMMER 2017

189 teachers registered (a new record)
112 teachers registered in non-funded workshops (a new record)
6 Workshop Intensives
2 Funded New Initiatives and 1 Funded Leadership Workshop
35% increase in enrollment vs. last summer
33% Increase in teachers where districts paid for PD
20% increase in Social Media followers
A record demographic diversity with teachers from around the U.S. and world

In the following sections, you'll find brief summaries on some of our active new initiatives and ongoing programs to give you a sense of the rich programming organized this summer.

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KID TALK TEACHER TALK (KT3)
IN ELEMENTARY SCIENCE

This year STEMteachersNYC received a two-year $307,000 grant from 100Kin10 for a project aimed at primary school teachers called Kid Talk, Teacher Talk in Elementary Science (KT3). KT3's premise is simple: kids who talk more, learn more. Co-led by science teachers from Montgomery Township School District (NJ), the program helps teachers apply the same classroom discourse techniques they use to teach reading and writing to science, and shows them how to integrate science into their classrooms. This year, we recruited 26 elementary school teachers and 10 mentor teachers to work collaboratively to enhance participant's self-confidence and expertise in teaching science and provide ongoing support for classroom implementation.

Over the course of two weeks, we saw an incredible community of practice form among participants, mentors and leaders. The first week focused on approaches to responsive teaching, how to launch an inquiry-based discussion, and how to carefully plan experiments and lessons that are relevant to students. The second week offered a space for KT3 participants to work in collaborative

teams and test their lessons with youth in grades K-4 - ranging from engagements with insects, animals and plants to explorations of sound, to engineering applications.

After just the second day of the KT3 workshop, one 4th grade teacher remarked:

> " I had to mention how much I've learned in the past 2 days! I am very excited to start teaching again in September. I think I finally realized what Dr. Zywicki [Weehawken Superintendent] was talking about when he said he wanted student-centered classrooms. It is finally clicking. I am very excited to bring what I have learned to Weehawken! I have done the Stevens program for the past 2 years with intense NGSS training and I will say honestly, this program is putting them to shame! We know the standards, we just want to know how to teach them, and this workshop is it! Thank you!
>
> (Allisyn Yanuzzi, 4th Grade Teacher, Theodore Roosevelt School) "

Next year, a new cohort of primary teachers will join the project and the on-line community of practice it creates.

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COMPUTATIONAL MODELING IN PHYSICS FIRST (CMPF)

In August STEMteachersNYC organized the second summer of the 100Kin10-supported project, Computational Modeling in Physics First, in partnership with the American Association of Physics Teachers, American Modeling Teachers Association, and Bootstrap, a computer science program at Brown University. Eight participants from the first summer were joined by 22 new teachers, 10 of whom are funded through an NSF grant to AAPT, which will allow the project to continue through 2019 and fund formal research.

This year participants were engaged with a new coding language called Pyret, and over the course of three weeks teachers worked in small teams to develop lesson plans integrating physics content with approaches to coding to create computer models of physical phenomena. The three week program was incredibly lively and created a unique space to explore how physics is presented to students, what role technology can play in the STEM classroom, and how students engage with and experience core science concepts.

SPECIAL THANKS TO OUR PARTNERS AND SUPPORTERS!

AMTA — American Modeling Teachers Association

BOOTSTRAP — Equity • Scale • Rigor

AAPT — PHYSICS EDUCATION

100KIN10 — ANSWERING THE NATION'S CALL

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MODELING LEADERSHIP DEVELOPMENT

In July, STEMteachersNYC organized its third summer of Leadership Development Workshops in collaboration with American Modeling Teachers Association. This summer we worked with 13 hand-picked master-teachers from across the country to address the national shortage of qualified Modeling Workshop leaders. Participants had the opportunity to directly observe Modeling workshops in session at Teachers College, as well as discuss best practices in developing modeling-focused professional learning programs for teachers.

SIMONS FOUNDATION

ABOUT US

STEMteachersNYC is dedicated to interchange and interaction among teachers of STEM. Our general purpose is to cultivate excellence in STEM teaching and to promote learning, self-confidence and success for our students. STEMteachersNYC is a 501(c)3 non-profit, and Continuing Teacher and Leader Education (CTLE) vendor for the New York City Department of Education (#STE-068881).

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