TEACHFORAMERICA

Careers in Physical Sciences and Mathematics

There is a growing need for professionals in the sciences and mathematics fields, yet our public schools—especially those in low-income communities—are failing to adequately prepare students for these careers. Through Teach For America, mathematics and science majors can help expand and diversify the pipeline of future mathematicians and scientists by providing more students in low-income public schools with the skills, knowledge, motivation, and support they need to be successful. You can make a significant impact on your students' understanding of these subjects while inspiring them to pursue a career in one of these fields. At the same time, you'll gain valuable insight into the issue of educational inequity. Our alumni say that spending two years teaching in a low-income community profoundly impacted their thinking and allowed them to develop a useful skill set for future mathematics and science pursuits.

SHEILA KANNAPPAN

- Assistant Professor of Astrophysics, Department of Physics and Astronomy, University of North Carolina at Chapel Hill
- Eastern North Carolina Corps '91, taught 9th grade physical science at Edwards Junior High School
- Harvard University, Ph.D. physics '01, M.A. history of science '01
- Harvard University, B.A. physics '91

Two of my closest college friends grew up in low-income communities, and they opened my eyes to the economic disparities in our country. Despite their economic disadvantages, my friends had attended well-resourced public schools in New York City and Oregon, and by college we were on similar career paths. Discussing their experiences raised my awareness of the connection between educational opportunities and life outcomes.

During my junior year in college, I questioned my choice to pursue a career in physics. I felt compelled to work toward ending the inequities I was seeing in science education. I wanted to combine my passion for science with my emerging interest in educating the next generation, especially those populations traditionally underrepresented in science: people of color, women, and those from low-income backgrounds.

Initially, I struggled to reach my students. I received support from my principal and from Teach For America's staff. My students responded to being held to high standards, and significantly improved their scores on the end-of-year state tests, with several reaching the advanced level. Being able to work through my own limitations to make a difference for my students was a life-changing experience.

The focus and time-management skills I acquired in the corps proved invaluable in graduate school. Because of my Teach For America experience, the Harvard physics department allowed me to develop a tutorial course for undergraduates. I started an informal mentoring program for female graduate and undergraduate students, and I mentored several students in local schools. As a postdoctoral researcher at the University of Texas at Austin, I won a National Science Foundation (NSF) fellowship that allowed me to combine high-level scientific research with education and public outreach work, giving me a competitive edge in the faculty job market. I still use the teaching approach I learned from Teach For America: I have high expectations of all students and set clear goals.

Seeing the challenges facing rural public schools deepened my commitment to bringing science to underrepresented populations. I chose to teach at the University of North Carolina because it values community service and focuses on attracting a diverse population of students. I also was glad to return to the region where I taught and to continue working toward educational equity. I am currently working with Teach For America physics teachers to develop curriculum-based materials that bring the excitement of astronomy into underserved schools and that inspire students to pursue science careers. It's challenging work, but it's also fulfilling to be doing something so worthwhile in the place that I consider home.

For opportunities to engage with alumni and other events, please visit www.teachforamerica.org/events.

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PHYSICAL SCIENCES AND MATHEMATICS GRADUATE SCHOOL PARTNERSHIPS

A growing number of physical sciences and mathematics graduate schools partner with Teach For America to offer special benefits for corps members and alumni, such as two-year deferrals and application fee waivers. These graduate schools seek out our alumni, recognizing that they have gone through a highly selective program and have engaged in a challenging professional experience.

A selection of physical sciences and mathematics graduate schools partnered with Teach For America:

Chemistry
- California Institute of Technology – Division of Chemistry and Chemical Engineering
- Massachusetts Institute of Technology – Graduate Program in Chemistry
- University of Chicago – Graduate Program in Chemistry
- University of Illinois at Urbana-Champaign – Graduate Program in Chemistry
- University of North Carolina at Chapel Hill – Graduate Program in Chemistry

Mathematics
- Northwestern University – Graduate Program in Mathematics
- University of California, Berkeley – Graduate Program in Mathematics
- University of California, Los Angeles – Graduate Program in Mathematics
- University of Michigan – Graduate Program in Mathematics
- University of Texas at Austin – Graduate Program in Mathematics

Physics
- Harvard University – Graduate Program in Physics
- Northwestern University – Graduate Program in Earth and Planetary Sciences
- University of Arizona – Graduate Program in Physics and Astronomy
- University of California, Berkeley – Graduate Program in Physics
- University of Washington – Graduate Program in Physics

›› Search our complete graduate school partnership database at www.teachforamerica.org/grad.

> Our science, technology, engineering, and mathematics workforce is the backbone of our innovation economy and the source of our economic and national security. We must value science, those who do it, and those who teach it. And we must tap all of the talent this nation has to offer. Success begins in the classroom. Teachers who are prepared, equipped, and passionate about the possibilities of science and math offer our best hope for the next generation. Teach For America seeks to bring that sense of possibility, that passion for discovery, that spark of hope into underserved math and science classrooms, and our nation will be stronger for it.
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> **Shirley Ann Jackson**
> President, Rensselaer Polytechnic Institute
> Former Chairman,
> U.S. Nuclear Regulatory Commission (1995-1999)

AMGEN FELLOWS PROGRAM

In 2006, Amgen became Teach For America's founding National Math and Science Partner. Each year, 50 math, science, and engineering majors receive Amgen Fellowships. These fellowships provide each recipient with a $2,000 signing bonus upon joining Teach For America. Additionally, as part of a partnership between the Amgen Foundation, DonorsChoose.org, and Teach For America, fellows are eligible to receive funding for valuable student learning materials and innovative math and science classroom projects. You are automatically considered for the Amgen Fellowship if you are accepted to the corps and have a degree in science, mathematics, and/or engineering.

CONNECT WITH ALUMNI

The following alumni are available to share their experiences and answer any questions you may have:

Joanna Hass
- Technology Development Engineer, Intel
- Mississippi Delta Corps '98
- Georgia Institute of Technology, Ph.D. physics
- Bowdoin College, B.A. chemical physics
- joanna.hass@intel.com

John Haws
- Senior Research Statistician, Advanced Analytics Lab, The SAS Institute
- Rio Grande Valley Corps '92
- North Carolina State University, Ph.D. applied mathematics
- Loyola University, B.S. mathematical sciences
- john.haws@sas.com

Mala Radhakrishnan
- Assistant Professor, Department of Chemistry, Wellesley College
- Bay Area Corps '00
- Massachusetts Institute of Technology, Ph.D. chemistry
- Harvard University, A.B. chemistry and physics
- mradhakr@wellesley.edu

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