



**GLOBAL STEM ALLIANCE**  
The New York Academy of Sciences

**1000 GIRLS  
1000 FUTURES**

# IMAGINE

- A young girl in Egypt connects with her mentor, a successful female tech entrepreneur in California, who inspires and motivates her to continue her studies in computer science.
- A female student in an advanced chemistry course in Croatia conducts an online research project with peers in Malaysia, Benin, and the United States, all under the guidance of a successful, female pharmaceutical executive.



## AND NOW IMAGINE

*1000 Girls, 1000 Futures*, a \$2 million commitment to target and accelerate the STEM workforce of tomorrow by developing one of the world's most valuable resources – its women. The goal is to empower the next generation of female professionals in science, technology, engineering, and math (STEM).

*1000 Girls, 1000 Futures* is a transformational program with an emphasis on mentoring, designed to engage and inspire female high-school students to study STEM subjects and pursue related careers, and is part of the Global STEM Alliance of the New York Academy of Sciences. For these young women, mentorship provides STEM role models. Successful mentoring relationships lead to career and personal satisfaction, accelerated advancement, and greater compensation.

### Why it matters

Climate change. Water shortages. Epidemics. The greatest challenges in our history demand the innovative application of science and technology. In the United States alone, it's estimated that 75 percent of all jobs will require STEM expertise by 2018, with similar trends playing out in countries around the world. And yet students, particularly women, are dropping out of STEM at the moment when their skills are most needed; despite the fact that women are earning 50 percent of all college degrees, only 20 percent of these are earned by women in the STEM fields.

Although girls participate in equal numbers to boys in taking high level courses in science and mathematics in high school, as they progress through their education, a different picture emerges.



There is a dramatic shift in the continuation of their interest and desire to pursue the sciences. Although they are represented in careers in the social sciences and biology, for example, the greatest disparities occur in engineering, computer science, and the physical sciences. This is especially true of girls from diverse backgrounds.

We are losing these great minds – half the world – who can help us solve the grand challenges of our time.

### How it works

*1000 Girls, 1000 Futures* will increase the number of women in STEM fields through a coordinated, comprehensive program that will inspire new skills, greater engagement, and ultimately the drive to pursue STEM careers. The GSA will launch a pilot program in 2015, and fully implement the program in 2016 and 2017. All programming will be individually tailored to each participant's geography and interest area. Specifically, the program will include:

#### MENTORING

Mentoring helps women pursue STEM degrees and careers. The importance of personal relationships in encouraging young women to continue their studies in college and enter fields like science, math, and engineering cannot be overstated. Women in many countries need the influence of role models to attend college, earn advanced degrees, or pursue a career in STEM. Mentoring provides friendship, support, role models, and unique perspectives that can encourage women to continue pursuing education in STEM.

Each girl will receive one-to-one mentorship from a female STEM graduate student, postdoc, or STEM professional. They will be matched through a robust online matching platform, which uses career path profiles and learning objectives to create optimal mentor-mentee pairs and provides data on mentorship progress. In this way, participants will create long-lasting, impactful mentoring relationships that will not only help retain girls in STEM, but also help their pursuit of STEM-related careers.

#### SOFT SKILLS DEVELOPMENT

In addition to mentorship, each girl will complete online programming that targets soft skills development (e.g. communication, networking, leadership). In this way, girls will receive training in areas integral to STEM success in academic and professional arenas. Furthermore, girls will develop cross-cultural competencies to help them become global leaders, targeting areas such as awareness, planning, and cultural norms. As a result, girls will be more prepared to accomplish goals in the workforce regardless of location.

#### ANNUAL SUMMIT

Women rarely have access to informal networks and lag behind men in international collaboration, conference attendance, and opportunities to present. The *1000 Girls, 1000 Futures* Summit is designed to foster network creation and future collaboration by bringing mentees and mentors together for a multi-day event that will include networking opportunities, career path options, leadership training, presentations, and panel discussions. Girls and their mentors will have the opportunity to build networks, exchange ideas, discuss research, investigate careers, and continue their work on soft skills development.



### Why it will work

*1000 Girls, 1000 Futures* is based on the New York Academy of Sciences' NeXXt Scholars Program, established with the U.S. State Department and announced by then Secretary of State Hillary Clinton. This vital program connects young women from around the world with professional women working in STEM fields and supports them as they pursue studies in science, technology, engineering, and math.

Developed in 2012, the program includes young women from countries with predominantly Muslim populations (International Scholars) as well as college-appointed American students (American Scholars). The common denominator is that all are pursuing undergraduate degrees at U.S. women's colleges. The program has been highly successful, with 71 undergraduate mentees and 73 mentors participating. The retention rate for mentees is nearly 100 percent, with mentors expressing the true benefits of the program: they report receiving practical teaching experience, being better able to communicate, and enjoying a unique opportunity to make a critical difference in a young life.

### About the Global STEM Alliance of the New York Academy of Sciences

The Global STEM Alliance (GSA) addresses the growing need for highly skilled workers in science, technology, engineering, and math (STEM) by accelerating STEM learning around the world. The GSA is the first global initiative of more than 70 governments, corporations, educational institutions, and nongovernmental organizations in more than 50 countries and regions working with the New York Academy of Sciences to identify the world's best STEM talent and create a global network of promising students and noted scientists. The GSA will give rise to a new generation of STEM innovators. Together, this next generation will acquire the skills needed to take on the jobs that foster global economic development and the innovation necessary to confront the grand challenges our world faces.

### About the New York Academy of Sciences:

The New York Academy of Sciences is an independent, not-for-profit organization that since 1817 has been committed to advancing science, technology, and society worldwide. With more than 20,000 members in 100 countries around the world, the Academy is creating a global community of science for the benefit of humanity. The Academy's core mission is to advance scientific knowledge, positively impact the major global challenges of society with science-based solutions, and increase the number of scientifically informed individuals in society at large.

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Together we are committed to reaching 1 million students in 100 countries by 2020. You can join us. Visit [www.globalSTEMalliance.org](http://www.globalSTEMalliance.org)

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Please visit us online at [www.nyas.org](http://www.nyas.org)

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