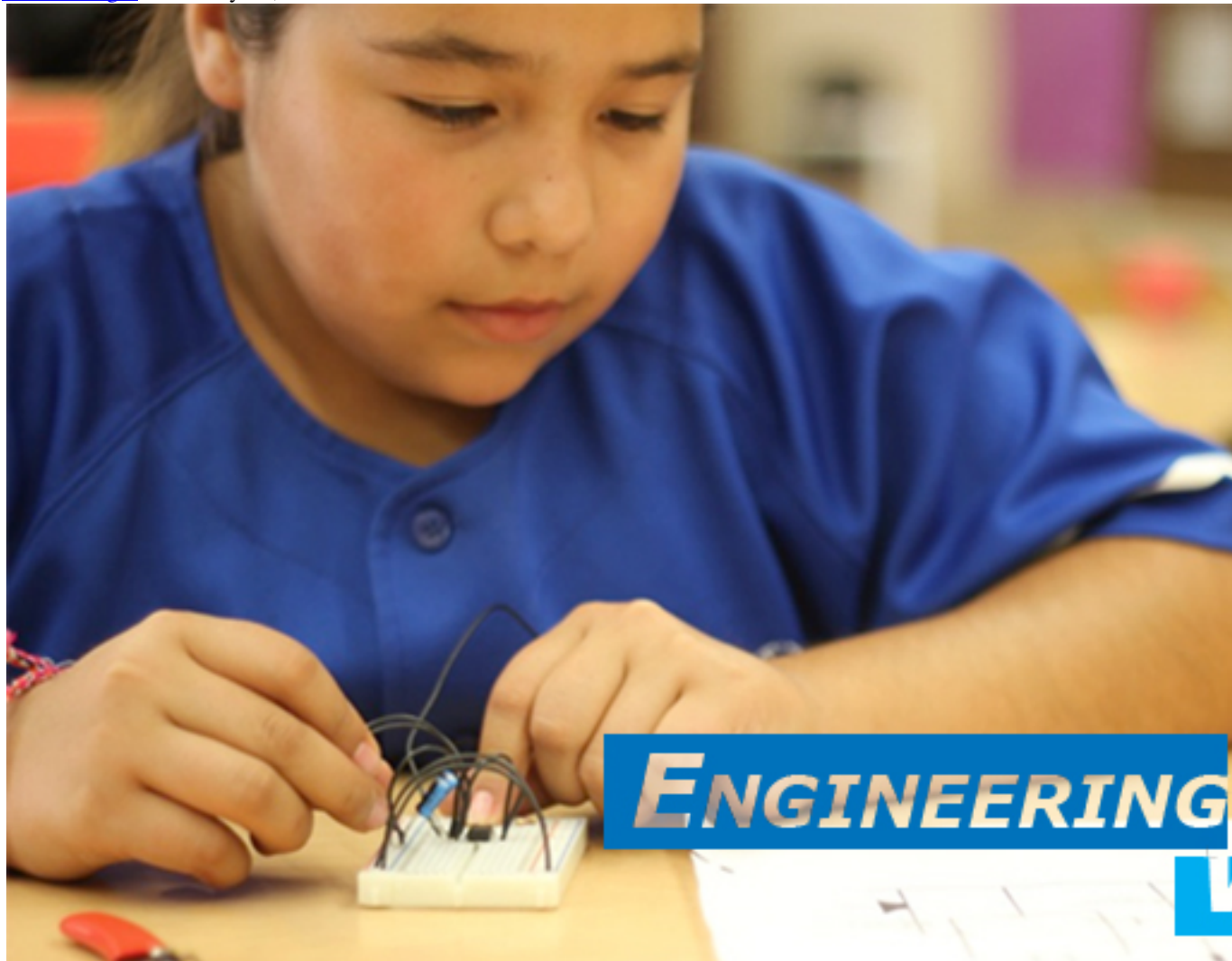# Luz Rivas and the DIY Girls are Taking on Tech

An engineer and an organization making a difference for young girls.

Bekah Wright | February 26, 2015

For most, revelatory, "aha!" moments occur in adulthood. Luz Rivas, however, had a pivotal one at age 10.

The year was 1984 and her fifth grade teacher introduced the class to an Apple II computer. "Back then, it only had a green screen and a cursor," Rivas recalled. "For it to do anything, you had to type in commands."

Rivas was captivated, spending all her spare time typing away in front of that green screen. Soon, she had another revelation.

"I was told there were careers in computer science," she said. "Then was further empowered to learn I had computer programming skills at 10 that most adults couldn't even grasp."

The wise elementary school student used this information moving forward, choosing electives that would support a career in computer sciences. Years later, these decisions would serve her well when earning a Bachelor of Science in Electrical Engineering from MIT and a Masters in Technology in Education from the Harvard Graduate School of Education.

Luz Rivas says she was the beneficiary of early STEM education, which, in part, instilled in her a desire to give that gift to others.

A successful career underway, Rivas concurrently worked in STEM education programs. A comment she heard often was that girls aren't interested in STEM.

"I disagreed," said Rivas. "My observation was that they just didn't have access, especially in low-income areas."

Reflecting back on her own childhood, a desire to give back took hold.

In 2011, Rivas founded DIY (Do It Yourself) Girls, an organization committed to exposing tweens to science, technology, engineering and math careers.

"DIY Girls is more than 'lets go talk to girls on career day and inspire them,'" she said. "Instead, it gives them a hands-on experience where they can successfully build or program something and in doing so gain the confidence to pursue more classes, activities and, eventually, a career in these fields."

Rivas modeled the program after her own childhood experiences.

"I wanted to provide an intense foundation to fifth graders before they hit middle school and were presented with curriculum choices."

Fittingly, lending support in getting DIY Girls off the ground was Rivas' former elementary school.

The first DIY Girls, 30 of them, enrolled in the after-school program during the fall of 2012. These days, DIY Girls has hundreds of students (and a waiting list, to boot), eight participating schools and a bevy of volunteers from the STEM world, and growing support including a partnership with General Motors announced last year.

The response to the program has been overwhelming, not just from the girls, but parents, teachers and communities. Now it's families having the "aha!" moments.

"If there's a boy in the family, parents have typically asked them to do hands-on tasks with gardening or construction," said Rivas. "Now, girls are being seen in a different light. What we've learned is that it's important to do outreach and make sure parents support their daughters in non-traditional fields."

DIY Girls provides hands-on STEM training to girls who would otherwise have very little exposure to such curriculum.

As DIY Girls continues to expand, so, too, do Rivas' goals for the program.

"We want to continue offering something to the girls as they grow older, so we're growing with them," she said. Last summer, DIY Girls did just that by hosting a five-week middle-school camp. On the roster: programming robotics, designing with recycled appliances, coding, toy design and wearable technology.

With DIY Girls' first participants entering eighth grade, Rivas is focusing on program options for high schoolers. "We've already taken them on college campus tours," she said. "There are plans, too, to connect our students with colleges and careers in the future."

As for Rivas, she has a five-year plan for DIY Girls, one she terms "very ambitious."

"The goal is to serve 3,000 girls a year."

And what might her 10-year-old self say upon hearing of such a mission? Probably something to the effect of "No problem."