

Panel at USASEF Explores Strategies for Attracting Girls to STEM

by Theresa Boehl

At April's USA Science and Engineering festival held in Washington DC, thousands of kids—boys and girls alike—explored the many exhibits and demonstrations that were designed to spark interest in STEM subjects and careers. But unlike the festival, the “real world” of STEM careers is missing something major: the presence of females.

A panel discussion at the festival addressed the lack of women in STEM careers and the ways that STEM professionals, educators and even parents can help bridge this persistent gap.

The panel included Dr. Karen Panetta, Tufts University professor of engineering and founder of the “Nerd Girls” global movement; Lindsey Shepard, vice president of sales for GoldieBlox, the start-up that created the now-infamous commercial encouraging girls to embrace engineering; and Andrea Beaty, author of “Rosie Revere, Engineer,” the highly popular children’s book about a girl who dreams of becoming an engineer. Moderating the panel was Kathy Park, a local reporter and weekend morning anchor for Washington’s ABC 7 and News Channel 8.

Tackling the Problem

Park opened the panel with a startling statistic: only 11 percent of engineers are women, according to the US Commerce Department.

For the panelists, getting more women involved in STEM careers means inspiring them and attracting them from a young age or at an early stage in their education, and each has taken great steps to help combat the problem.

Panetta recalled her start as a university professor more than 20 years ago. “They wanted me to be a role model for women students,” she said. “The only issue is that when I got there, there were no women students.” So she started Nerd Girls to encourage young women to embrace STEM

subjects and “nerd” culture, which continues to grow in popularity.

Beaty’s careers as a biologist and a computer scientist helped form a solid basis for her book about a curious, problem-solving young girl. Now, her passion for the subject has become contagious.

“When the book came out, I was blown away by the connection people seemed to be making to this,” she said. “I get emails from people who say, ‘My daughter wants to be an engineer now.’”



Left to right: Kathy Park, Dr. Karen Panetta, Andrea Beaty and Lindsey Shepard

Shepard, while not an engineer or scientist herself, got involved with GoldieBlox after realizing that the girls’ toy aisle was awash in pink, princess-y options and not much else. Now, she says she hopes to help change perceptions of what kind of toys and learning materials are appropriate for girls. “It makes sense that girls aren’t necessarily inspired to build when they’re not given these things to play with when they’re younger,” she said. “So we’re trying to change that.”

Broadening Horizons for Girls

Often, what’s missing in efforts to get girls involved in STEM is a clear relationship to the greater social mission of these subjects, according to Panetta.

“What we’re missing is connecting what real engineers do, how we help people and how we change the world, and also dispelling what we’re supposed to act and look like,” she says.

Beaty agrees, saying that as a society, we begin to exclude girls before they even get to middle school. Even she catches her-

self putting girls into those all-too-familiar predefined roles from time to time.

“When I’d be doing signings, girls would come up and I would say, ‘Oh, aren’t you cute there dressed like a princess?’ Why is that? Who cares how cute you are, because unless you’re a cat on the internet, cute doesn’t count.”

For Shepard, it’s about creating a clear context so girls have something to grasp onto and they know why they’re building what they’re building. “They want purposeful play, and adding a narrative element to our toys really gives them something to look at. During that process, they get engaged with the pieces and the vocabulary and really start to understand how this stuff works,” she said.

Looking Ahead

Beaty says it all starts with parents, who can help children embrace curiosity, tough questions and even recurring failure. Strong mentorship, too, is important.

Changing ideas about what a “nerd” is will help as well, especially as kids warm up to the term, now a badge of pride for intelligent youth passionate about their interests.

“Embracing that has become very socially acceptable, and getting young girls to realize that being smart is OK, and getting respected by peers is also something that’s going to change that conversation,” says Panetta.

Ultimately, the goal is to help young women find careers that are not only rewarding for themselves, but beneficial for society and the world.

“It’s really not about how many girls graduate from college with an engineering degree, it’s how many women actually pursue that and how many women actually stay in those jobs when they’re surrounded by men and it’s not a nurturing environment for women,” said Shepard. “The story goes beyond getting your degree and that’s really important to remember.”