

# Brain-Powered Toys

Two Silicon Valley entrepreneurs find success making playthings that inspire young women to learn more about science and engineering



Roominate co-founders Bettina Chen (left) and Alice Brooks

**Alice Brooks, at only 27 years old, is the CEO of Roominate, which makes engineering kits for young girls. As a child, she asked her father for a Barbie for Christmas. “He told me no,” Brooks says from her 3-year-old company’s Sunnyvale, California, headquarters. “He said, ‘Santa Claus doesn’t bring Barbies.’ Instead, he gave me a saw so I could make my own toys.”**

Ask Brooks’ father, Rodney Brooks, one of the founders of iRobot (maker of the Roomba), if he recalls refusing to buy his then-kindergarten-age daughter a Barbie, and he’ll hem and haw — and laugh. “Well,” he says from the Boston offices of his current company, Rethink Robotics, “it is true that I gave her a saw. I’ll say that. And she did have to make her own doll with that saw. But ... well, she has used that story to great effect.”

In fact, Alice Brooks has made the story about the saw into part of the corporate lore for Roominate, which has already sold hundreds of thousands of its pastel-colored, snap-together building kits that can take any number of forms and can be powered in a variety of ways by tiny circuits. She even talked about the saw last year on *Shark Tank*, shortly before Mark Cuban and Lori Greiner gave Brooks and her 26-year-old Roominate co-founder, Bettina Chen, \$500,000 for 5 percent of their company.

Without that saw, which Brooks used to build her own dollhouses, dolls and even a dinosaur with moving limbs, she might not be in Sunnyvale right now making and marketing toys she hopes will inspire a new generation of girls to pursue the kind of education in science, technology, math and engineering — or, as educators call it, STEM — that she did. “Playing with things, making things and trying to figure out how things work from a young age was really important in my development,” says Brooks, who has degrees in mechanical engineering from MIT and Stanford.

Roominate is based on the idea that playtime that involves building is especially important for girls. Brooks and Chen want to make a profit, of course, but they also want to change the way girls perceive their potential in STEM fields. “We’d seen the number of women in our engineering classes decline as we got further into our studies,” Chen says.

Their solution: a company that designs, builds and sells toys for girls that improve their spatial skills and, by extension, has the potential to boost girls’ interest in STEM fields. After graduating with engineering degrees from Stanford in 2012, Brooks and Chen launched Roominate with \$86,000 in funding from Kickstarter and an additional round of investment from venture capitalists. Before the company turned a year old, its kits were being sold on Amazon, then at Toys R Us.

Roominate offers several kits, and all of the plastic parts are modular, which means girls can snap them together to form a dollhouse, er, a “château.” Or they can come up with their own creations. The kits come with small electrical circuits that can be used to power whatever girls can come up with. A fan. An elevator. A merry-go-round. And all of those electronics can be controlled by a new Bluetooth-enabled, programmable device. “It’s so cool to see what girls come up with,” Brooks says. “This is basically storytelling through electrical circuits.”

Whether that kind of play will change the current dramatic imbalance between the genders in STEM fields is hard to say. Research has shown that girls and boys perform about equally as well in math and science in grade school and high

school, but more men than women take STEM-related classes in college, and the disparity grows as the level of education advances and as college grads with STEM degrees enter the workforce. A 2013 report from the National Science Foundation shows that women hold just 24 percent of all the available jobs in STEM fields. Some researchers believe that the disparity that develops between men and women in science has its roots in childhood, where boys tend to build more stuff than most girls. An analysis of research released last year by the American Association of University Women found that if girls grow up in an environment with spatial-skills training, “ ... they are more likely to develop their skills as well as their confidence in considering a future STEM career.”

Playing with toys created by Roominate or a handful of other toymakers, including LEGO and GoldieBlox, who have recently started making engineering-style kits for girls, is certainly not as formal as spatial-skills training, but Brooks and Chen still think their products can be formative. “This kind of play lets girls really open up and not feel limited just because they’re girls.”

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