



EDUCATION

Shaking things up: Young girls tackle designing earthquake-proof buildings



The Bonita Building Bananas put the finishing touches on their tower at the Fleet Science Center's SciTech Challenge competition on Saturday. Teams from several local elementary schools compete for the best earthquake-proof building made of recycled material, glue, and a lot of tape. (Brittany Cruz-Fejeran/For The San Diego Union-Tribune)

Competition at Fleet Science Center encourages elementary school girls to think 'I can do that' when it comes to science and technology

BY JOHN WILKENS

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SAN DIEGO — As any good structural engineer knows, materials matter. Saturday at the Fleet Science Center in Balboa Park, it was masking tape and hot glue.

Ten teams from five elementary schools in San Diego County were on hand for the culmination of a weeks-long program called SciTech. It aims to get girls interested in science and technology, fields that have long been dominated by males.

The challenge this year was to build a 4-foot-tall, earthquake-proof tower out of cardboard boxes, plastic yogurt containers, aluminum cans and other recyclables. A panel of judges was on hand to pick the best design.

But first the teams of 4th, 5th and 6th graders were given 30 minutes to put the finishing touches on their buildings, which they had erected over the course of four weeks. That's where the masking tape and hot glue came in.

"It needs more support here," one member of the Bonita Building Bananas team said, pointing to the seam where a Dunkin' Donuts coffee canister was attached to a box supported by paper towel rolls. Another team member moved in with a glue gun.

At a nearby table, a girl from the Daisy Thin Mints team threw up her hands and said, "It's still wobbly!" Masking tape got applied in long strips.



Hot glue is spread on team Bonita Building Bananas' structure at the Fleet Science Center's SciTech Challenge competition on Saturday. (Brittany Cruz-Fejeran/For The San Diego Union-Tribune)

Problem-solving is a big part of SciTech, according to Daniela Sanchez Cruz and Madeline McClanahan, the Fleet Science educators who run the program. "We want them to gain the confidence to be creative and to figure things out together," Cruz said.

Schools apply to participate in the after-hours program, which started in 2008. This year, about 50 schools wanted in and five were selected: Avondale Elementary in Spring Valley, Logan Memorial Educational Campus in Logan Heights, Bostonia Global in El Cajon, Bayside STEAM Academy in Imperial Beach, and Ella B. Allen Elementary in Bonita.

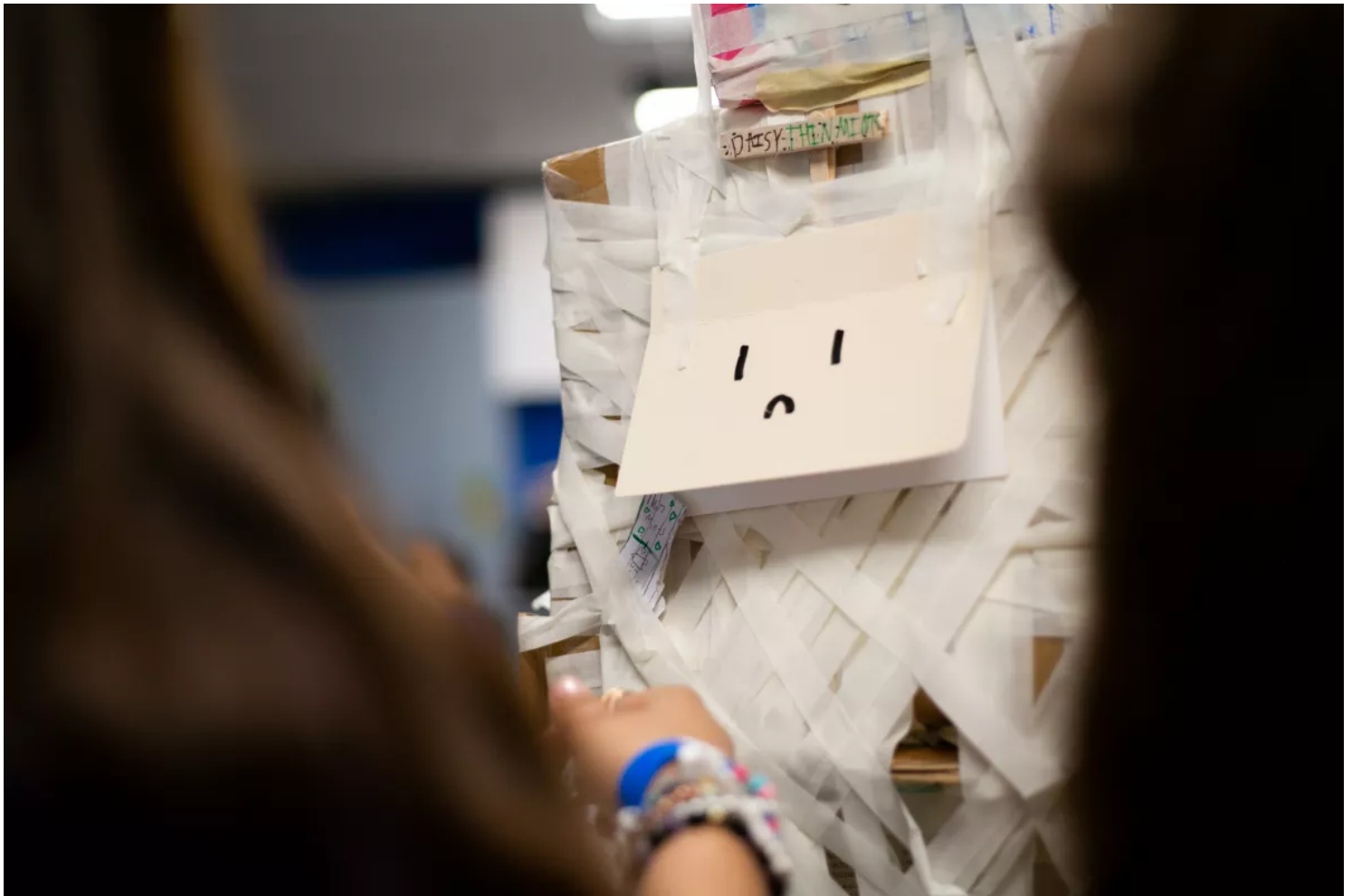
"We need more girls in science," said Kevin Coordt, the principal at Bayside. "If they don't get exposed to it in elementary school, they're less likely to take science classes in

middle school, and AP chemistry in high school, and on down the line. Our girls can't be what they can't see."

After the teams finished shoring up the towers Saturday, the buildings were put on carts and wheeled to the Heikoff Giant Dome Theater, where the four judges were waiting — all of them women with scientific backgrounds and jobs.

One by one, the teams came forward. Some of the towers were taller than the girls who built them. The structures were tested for strength by placing a 5-pound weight on top and leaving it there for 15 seconds. They were moved to a shake table and jostled for 60 seconds to gauge their resiliency.

Only a couple towers came apart during the weight test or the shaking. "You all did a great job," said Christine Stofko, one of the judges and a manager at Aya Healthcare who remembered her own struggles as a girl interested in science: "It wasn't cool to be a nerd back then."



The Daisy Thin Mints team named this sad face Stevenson at the Fleet Science Center's SciTech Challenge competition on Saturday. (Brittany Cruz-Fejeran/For The San Diego Union-Tribune)

She announced the winners of honorable mention, third-place, and second-place ribbons, and then the top prize, which went to the Daisy Thin Mints, from Bostonia, for a tower they called (for reasons even the girls couldn't explain) "Stevenson."

After team members Avery Stich, Sage Keener, Violet Williams and Anahi Granillo accepted their awards, they posed for pictures. Nobody had to tell them to smile.

They walked back to their seats and one of them shouted, "Stevenson forever!"



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