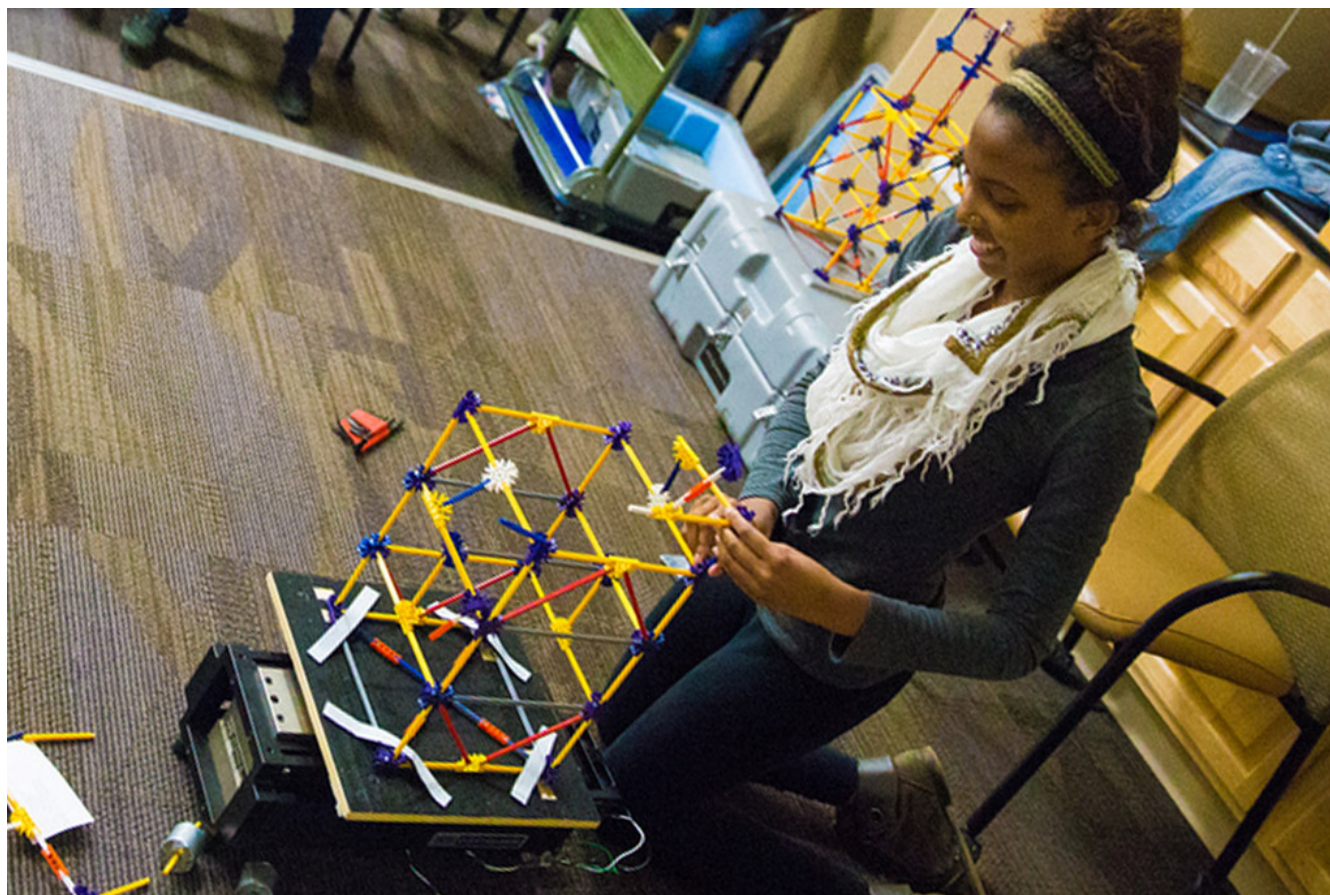


Seismic Science

Engineering students use hands-on approach to teach sixth graders fundamentals of earthquake engineering



Over the past seven years, more than 7,000 sixth graders from 26 schools in San Diego County have visited the Jacobs School of Engineering to build model structures and test them on small shake tables. It's all part of the Earthquake Engineering with K'NEX Outreach Program run by the UC San Diego chapter of the Society of Civil and Structural Engineers.

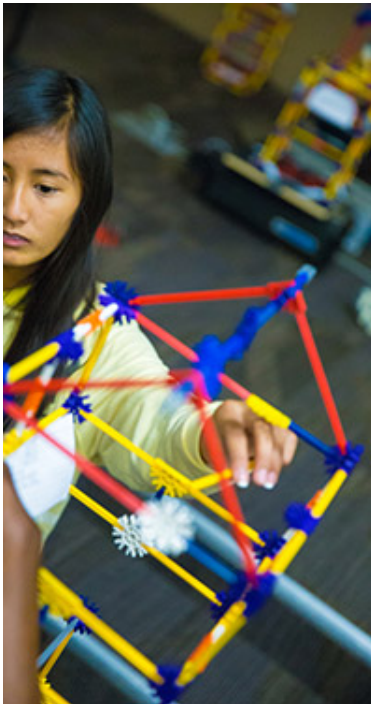
On a recent Monday morning, nearly 50 of these sixth-grade students, from the San Diego Unified School District's Whitman Elementary, dotted the lawn outside of Jacobs Hall en route to test their toy structures.

Headed by third-year structural engineering major Kayse Sheppard, the student-run program educates local students in the fundamentals of earthquake engineering.

Sheppard was one of seven volunteers that went out to local elementary schools to teach students about earthquakes and how good design can prevent buildings from collapsing. The volunteers then provide students with K'Nex building blocks, so they can create model buildings to be tested on UC San Diego's miniature shake table – a tool used to simulate earthquakes– worth \$30,000 commercially.

Built by teams of five students, the designs are judged by UC San Diego seismic outreach volunteers for how well they held up on the shake table, creativity and cost effectiveness. The best designs are awarded a certificate of achievement.

After all the buildings have been tested, UC San Diego undergraduates take the students for a tour around campus.



“This is the second year we’ve done the seismic outreach program, and both myself and the kids love it,” said Jennifer Segars, a participating sixth-grade teacher at Whitman Elementary, in the North Clairemont neighborhood of San Diego. “The volunteers do a really good job teaching the kids and the kids get really excited to build their structures.”

According to Sheppard, this fall quarter, five schools from the San Diego Unified and Del Mar Union school districts will participate in the program. The program will host more schools this spring quarter.

“I think in elementary schools, science is sometimes put on the backburner,” program faculty advisor Lelli Van Den Einde said. “I think the program is a great opportunity to get kids engaged and excited in science. Some of these kids have never had the chance to come to a college campus, and it’s

amazing to see the energy and excitement they bring to the project.”

Van Den Einde – a UC San Diego lecturer teaching the Conceptual Structural Design course – says the program now in its eighth year, is looking to expand. The effort is spearheaded by two Jacobs School Ph.D. students, who are also Gordon Center scholars. Scott Ouellette and Colin Haynes first got involved with the seismic outreach program as undergraduates. The two are reaching out to other Southern California universities, including other UC campuses and Cal Poly Pomona.

“I believe that it's very important for engineers to reach out in our communities and educate kids about what we do,” Haynes said. “We not only inspire kids to choose engineering careers, but also develop young engineers into more effective communicators and more engaged citizens.”

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