

NSF Highlights

Earthquake Center Brings 'Quake & Shake' Contest to Third-Graders

Highlight ID: 13193

The Earthquake Engineering Research Center MCEER, headquartered at the University at Buffalo, holds a "Quake & Shake" contest with local students each year as an enjoyable way to teach them about earthquakes. The program is part of MCEER's goal of increasing K-12 students' knowledge and excitement about science and engineering.

The MCEER ERC took its 2006 Quake & Shake contest to a group of 24 third-graders at the Sheridan Hill Elementary School in Clarence, New York. MCEER Deputy Director Andre Filiatrault visited the class weeks before the event to talk about earthquake design and offer pointers on the contest.

The students were given 150 popsicle sticks, a bottle of Elmer's glue, and a roll of dental floss with which to build a structure that supported a masonry brick held a foot above a wooden base. The models were tested on a shake table at the university that simulated ground motions that occurred during historical earthquakes. The structures were then subjected to the designed "UB Rumble," a long and strong series of ground motions, until they all collapsed.

After the UB Rumble, all the structures were declared "earthquake proof" and each student received a certificate naming him or her an "honorary structural engineer." The event was covered by local media, including CBS Channel 4's "Why Guy," Kevin O'Neill.

To learn more about this topic, visit the MCEER education website at <http://mceer.buffalo.edu/education/k-12/05QuakeandShake/default.asp>.

Primary Strategic Outcome Goal:

- Learning: Cultivate a world-class, broadly inclusive science and engineering workforce, and expand the scientific literacy of all citizens.

Secondary Strategic Outcome Goals:

How does this highlight address the strategic outcome goal(s) as described in the [NSF Strategic Plan 2006-2011](#)?:

By using dynamic and exciting experiments to stimulate the interest of third-graders in engineering and technology relating to earthquake-resistant design, this project helps to encourage talented American young people to follow the engineering pathway into the technical workforce. For all the participating youngsters, it helps to improve STEM literacy. Media involvement in this outreach effort also brings broader public attention to the concepts involved in earthquake engineering.

Does this highlight represent transformative research?
No

ENG/EEC 2007

Program Officer: Lynn Preston

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Award Title: Multidisciplinary Center for Earthquake Engineering Research (MCEER)

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Institution Name: SUNY at Buffalo

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Related Center or Large Facility: MCEER

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ENG: Approved 02/20/2007 by Joanne D. Culbertson



Third-graders show off the popsicle-stick structures they built to withstand earthquake-like conditions in the Quake & Shake event.

Permission Granted
Credit: MCEER



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