Student Clubs
LIVEN UP SCIENCE for Middle Schoolers

This was no ordinary egg-drop challenge.
By Jess Clarke

Students at Burlington’s Hunt Middle School had about 40 minutes to design and construct—from newspaper and masking tape—a structure that was able to protect an egg from a heavy, falling object.

Supervised by CEMS’ Society of Women Engineers (SWE) members, Hunt students planned their design, decided on a budget and “bought” the materials. SWE members asked the kids questions to spur critical thinking about various designs before a heavy ream of paper was dropped atop the structures protecting the eggs.

SWE was one of three CEMS clubs that participated in a STEM outreach project at Hunt last semester. The other participants included members of Engineers Without Borders (EWB) and the American Society of Civil Engineers (ASCE). The project, which will continue this semester, aims to spread awareness about STEM careers and CEMS, and gives UVM students opportunities to build skills in teamwork, communication, leading projects and giving presentations.

“We hope that this outreach will get kids, especially girls, excited about engineering and all of its possibilities,” says SWE member Megan Yeigh, a senior mechanical engineering major from Annapolis, Maryland.

The outreach project, part of Hunt’s after-school program, was so popular with the kids that program director Rebecca Reese even had to turn away a handful of students. “The kids all asked me if we would offer it again. A lot of them love the hands-on aspect of science,” Reese says.

EWB club members led Hunt students on a slightly different science activity, one investigating kinetic and potential energy through the launching of projectile objects. Working in pairs, four teams built catapults with wire hangers, rubber bands and plastic spoons. The catapults were to be used to launch small pieces of sponge.

In their excitement, the students didn’t want to wait to launch their projectiles, says club member Erica Quallen, a senior Civil Engineering major from Pittsfield, Massachusetts. To prevent total mayhem, she adds, “we turned it into a competition to see which team could launch its sponge the farthest.”

Members of ASCE had the kids use building blocks to create towers and other structures to illustrate concepts, such as foundation, load, tension and compression. Jenga-style, the kids experimented with stacking blocks and pulling them out from the pile to test how high they could build.

CEMS clubs will continue the classes weekly at Hunt this spring. Students representing computer science, math and mechanical engineering groups also are expected to participate this semester.

Back at the egg drop activity, one group achieved resounding success by taping tightly rolled newspaper strips all around the egg. While their classmates’ eggs cracked when the ream of papers was dropped 12 inches, the newspaper group’s eggs stayed intact even when the ream was dropped from 24 inches. The team, not surprisingly, was ecstatic.