

Waterbury teachers learn how to get energy efficiency in students' minds

**BY DAVID KRECHEVSKY REPUBLICAN-AMERICAN**

WATERBURY — As instructor Robert Borello approached, the science lab partners looked up from studying thermometers half buried in three plastic cups of material directly beneath separate table lamps.

Alan Piccolo, one of those partners seated in the third-floor science room Monday in Wilby

High School, shook his head. The trio was conducting an experiment to see whether the denseness of a material affected its heating properties. The cat-box filler in the middle cup heated faster and retained its heat better than the contents of the other cups, gravel and coarse sand.

"We needed them all to be of the same material," Piccolo said to Borello, noting the group could not be sure the results weren't affected by clay in the cat-box filler. "It would have worked better if we had ground up some of the gravel."



**Robert Borello conducts a workshop for science teachers in Waterbury on how to teach energy efficiency to pupils Monday at Wilby High School. The program, called EE Smarts, is run by CL&P and is free for the school system, paid for out of the energy conservation fund. (Josalee Thrift / RA)**

This was not a typical exchange between teacher and student; in fact, Waterbury's students don't return to school until Wednesday.

The 20 students in this classroom were ninth- and 10th-grade science teachers from throughout the city school system, participating in a professional development workshop. Titled "eesmarts," for Energy Efficiency Smarts, the workshop offered alternative ways to engage students in all grade levels in learning about energy efficiency and alternative energy sources.

The program was started four years ago by Connecticut Light & Power Co. and United Illuminating, with help from Wesleyan University's Project to Increase Mastery of Mathematics and Science, or PIMMS. The workshops are funded by grants from the Connecticut Energy Efficiency Fund, which is financed by an energy conservation surcharge on electric customers' bills.

According to Rebecca Meyer, CL&P's "eesmarts" program administrator, the program is offered free to all participating teachers and school districts, and provides curriculum materials. It will be offered to Waterbury elementary school teachers in October, but has been used in Hartford, Monroe, North Haven and Trumbull, among other districts, as well as in the state's technical high schools, she said.

The workshop helps teachers learn to use a curriculum that engages students by making them part of the teaching process, helping to decide what questions need to be asked and then discussing how to find the answers.

"It's challenging to teach anything to students these days," said Dave Celotto, who teaches ninth-grade science at Wilby and was a lab partner with Piccolo and Christine Perugini, both of whom teach 11th-grade chemistry at Wilby. Teaching energy issues to students is important, he said, because "it's a huge issue for our country, and something kids need to know about."

That's especially true now that energy efficiency questions will be included on standardized tests, including the Connecticut Mastery test and the Connecticut Academic Performance Tests.

"They're getting kids to realize they have to ask certain types of questions," said Karen Calechman, outreach coordinator for UI. "On the 10th-grade CAPT tests, the students will have to devise their own experiment that can be investigated. They're trying to get kids to think critically and analytically."

Monday's workshop demonstrated this to the science teachers, who started by measuring how white and black sheets of paper reflected or absorbed heat from lamps, and how dry and wet soil did the same. But then they had to come up with related questions that could be tested further.

"We're studying the inquiry process," said Borello, associate director of science for PIMMS at Wesleyan in Middletown. "We are modeling it for the teachers so they can use it effectively in their own classrooms."