

# Science test gets trial run

## Statewide effort begins as curriculum is in flux

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Science teacher Courtney Bauknecht talks with student Mekji Johnson, 8, Javier Quirindango, 9, and Lillian McCarthy, 8, about the life cycle and environment of a tank of shiner fish Thursday during science class at Brass City Charter School in Waterbury. The state will begin new tests this spring tied to Next generation Science Standards forgoing the CMT's. Jim Shannon Republican-American

### WATERBURY

The first thing students at Brass City Charter School do when they enter Courtney Bauknecht's classroom is what she calls "a gallery walk" along the walls.

Students step past multiple glass tanks on shelves, peering at house fish, frogs, toads and other creatures, making observations.

Bauknecht points to the walls of one tank.

"This habitat is set up to actually mimic what a pond would look like, because most kids would never actually get to see the bottom of it," she said just before a



Jahzir Jones, 10, gets a hand from substitute teacher Joanna Vann Thursday during science class at Brass City Charter School in Waterbury. The state will begin new tests this spring tied to Next generation Science Standards forgoing the CMT's.

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class of third-grade students made their gallery walk. “So there’s algae – by design.”

Then, Bauknecht points to another tank, which contains shiners.

When public school students in grades 5, 8 and 11 across Connecticut take statewide tests in science, they will be online – and aligned to national science curriculum standards. The new test, which has been rolled out throughout schools in Connecticut and other states over the past few years, is based on what’s called the Next Generation Science Standards that will replace the previous Connecticut Master Test in science.

In Waterbury, Supervisor of Science and Technology Education John Reed anticipates the new tests students will require students “to take a lot of info, text, or video and synthesize it.”

“It’s a different kind of test,” he said. “It requires a lot more thought.”

This first round will be a trial, and results won’t be publicly reported by the state Department of Education, as with other tests, including the Smarter Balance Consortium tests, SATs and the previous CMTs.

However, test administrators and developers will analyze how well students were able to respond to problems as presented. Next year comes the actual high-stakes tests.

New tests and standards also mean a new way of teaching science, officials said. “From the way I was taught, it was very direct instruction,” Bauknecht said. Now the approach is more inquiry-based and asks students to make observations and form their own questions and theories.

“Because we were so fact driven, I tell my kids all the time, ‘Don’t tell me what you know. Tell me how you know it,’” Bauknecht said.

How school districts are incorporating and teaching the new standards varies, according to Nicholas Balisciano, director of programs at the Connecticut Science Center’s Mandell Academy for Teachers.

The Science Center has been one of the agencies providing professional development for teachers in how to teach to the new standards, which is now in their third year of implementation.”

“It’s really up to districts to decide how fast they want to move,” Balisciano said.

Wolcott Public Schools have opted to take three-year approach to rolling out the new standards and revising curriculum, targeting a different range of grades each year, Superintendent Anthony Gasper said.

“This includes strategies for integrating new engineering practices, as well as the use of observable, real-world phenomena to promote student inquiry and engagement,” Gasper said, adding the district is prepared to deliver the field tests this spring.

In the classroom, the new standards have changed the way instruction is given, with teachers becoming discussion facilitators.

“The way that they’re learning now promotes more critical thinking skills. It also gives them a context. Typically you have them read, and that’s all they’re doing is reading about science. Now they have this hands-on experience,” Bauknecht said in her classroom.

As for the third grade lesson last week, it focused largely on the silver-shiners zipping through their tank.

“Let me ask you this what color were shiners when we put them in the tank?” Bauknecht said to one of those groups as she held a silver tray. “They were silver and shiny like the color, of my tray, right?”

Then she put a purple bucket near the tray. Students took note that the purple reflected onto the tray, appearing to change its color. Similarly, the fish, when they swam by brown rocks and green plants, took on those colors.

“These shiners, they have a shiny reflective trait,” Bauknecht said.

Then Bauknecht offers a final question, which the students ponder, but notes they don’t answer it at that moment: “I want you to think about it. If the trait they have is that they’re shiny and they’re able to be camouflaged, why are we able to use those fish to catch other fish?”