Science comes alive in the classroom

PILOT PROJECT: Hands-on work with real scientists hitting home with young students

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It's science time for Grade 1 and 2 students at Queen Alexandra School, and the youngsters crowd around cups, carefully conducting experiments into the behaviours of liquids in solutions.

Step by step they mix water and oil, milk and food colouring and in big, careful print, record their astute observations, to wit: "It is bubbling and it is not happy mixing together."

Today's lesson? Water and oil may not mix, but scientists and classroom teachers do.

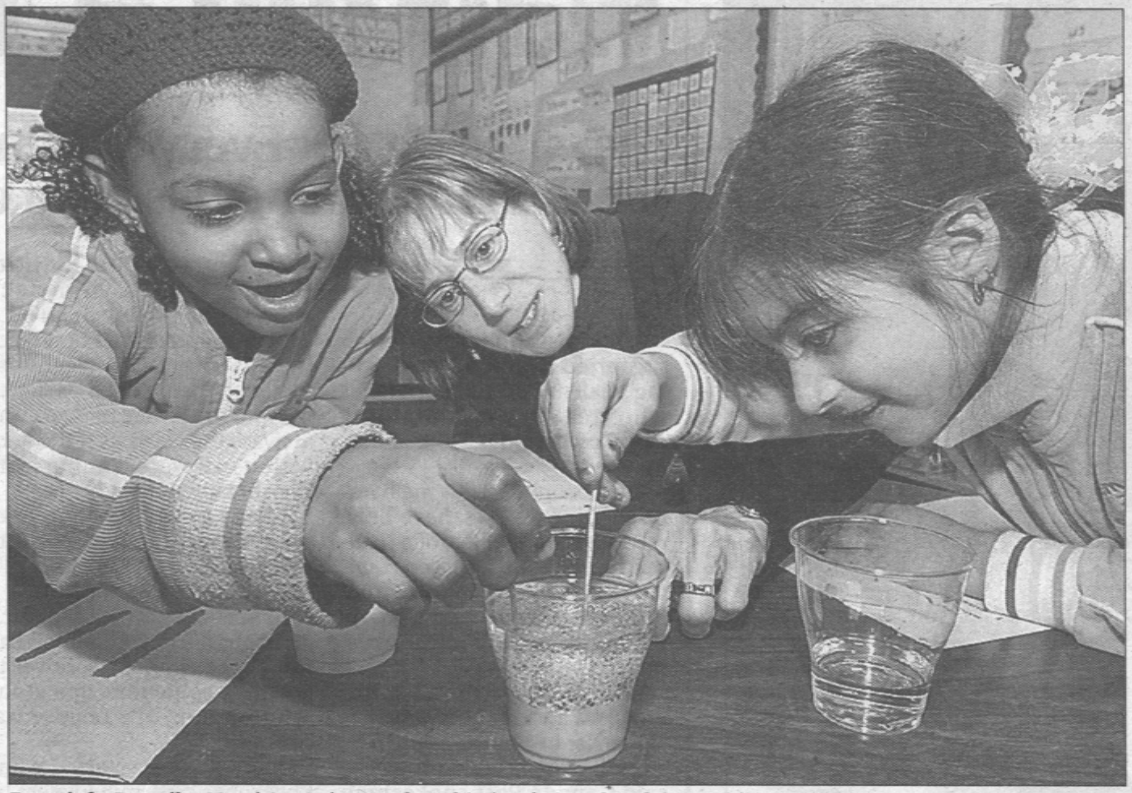
The class was facilitated by Vancouver research scientist Paige Axelrood, who has joined forces with the Vancouver School Board to design hands-on curriculum to help elevate the level of scientific discovery in elementary classrooms.

Axelrood has made a career in cutting-edge labs with Vizon Sci Tech and when her own daughter, Rachel, entered school, she wanted to ensure she and her classmates had access to first-rate experiments.

So with the help of a grant from the Vancouver Foundation, Axelrood and the board founded a pilot scientist-in-residence program in Queen Alexandra, Laura Secord and Lord Selkirk Annex.

"One of the things we really like to do in this program is give students time to discover," says Axelrood, a plant pathologist who studies forest soil and plant bacteria.

The program launched in the fall, with the help of two other volunteer scientists: Catriona Ann Gordon, an environmental studies and botany specialist, and University of B.C. forestry genome researcher Steven Ralph.



From left, Eustajha Martin,7, Paige Axelrood (scientist) and Malalay Habib, 6½, learn about liquids at Queen Alexandra School. JON MURRAY — THE PROVINCE

The eight-week sessions are planned in collaboration with the classroom teacher so when the scientist in residence moves on, the resources remain.

"A lot of elementary school teachers may not have had a lot of exposure to science," Axelrood explains, "and a scientist can help bring science alive in a way that's accessible."

Grade 1 and 2 teacher Nancy Arnold agrees. "When you're a primary school teachers you're a generalist. Science is not my strong suit . . . I'm learning with the children."

And the children were engrossed.

"We learn new things. We learn about gas, solids and liquids by using your mind," says Grade 2 student Eustajha Martin. "You get to think about something that's going to happen and see if it does happen."

"I like science because you can do some cool stuff," says seven-year-old Simon Calas. "She gets a volunteer and then we know how to do it."

Queen Alexandra principal Catherine Feniak says the program has lit a fire under her students. "It's created a huge buzz around science in the school."

In coming weeks, Axelrood will teach force and motion by launching marshmallows into the air, changes to matter by popping popcorn and secrets of friction and gravity on the playground slide.

Vancouver Foundation program director Mauro Vescera approved the year-long, $40,000 pilot project. The board has applied to run the program for another two years, ultimately reaching 1,000 students in 36 classrooms.

"It has huge reach," Vescera says. "Teaching science in elementary schools is often a challenge. Anything we can do to support professional development and student learning is a win-win situation."

Grade 3 teacher Janet Vesterback completed a semester of plant biology lessons with Paige in the fall and was thrilled with the results.

"She brought a lot of background knowledge to the program that I wouldn't be able to do because it takes a lot of research," she says.

Another bonus: Students get to see real scientists aren't all white-haired men in lab coats.

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