

# VSB's Scientist in Residence program:



Grade 3 students examine how a clam propels itself in an experiment at Dawid Lloyd George Elementary

## By Angelique Crowther

Elementary school teachers and students are experiencing science in a whole new way thanks to the Scientist in Residence program.

The program, launched in 2004, is for students in grades K to 7 and operates in seven to ten schools each year. This program is unique in that it partners a scientist with two teachers at each participating school. Together, they develop six hands-on science lessons on a specific theme which are co-delivered in the class in the spring.

Making science real for young learners is a challenge that interests scientist Catriona Gordon. Gordon, a botanist, has been with the Scientist in Residence program since its inception and was drawn to teach science to elementary students through her own experience as a parent in the school system.

"I volunteered to teach science when my daughter entered preschool" said Gordon. "Having children in the school system has shown me how teachers are stretched and that I can help them by bringing my experi-

ence into the class." Gordon has also encouraged other parents with science backgrounds to come to class and speak about their work.



Students interact with a chart showing tidal zones

This year Gordon teamed with teachers from David Lloyd George Elementary to develop lessons and teach

a unit on plant and animal needs and adaptations. Teachers Barb Hinson, Annie Lee and Amber Burma worked as a team to develop the lessons for Grades 1 and 3.

Hinson, a Grade 3 teacher, enjoyed collaborating with Gordon and finding ways to make science real. "Students love hands-on work," Hinson says. "This year science was the only subject where all my students met expectations. Our ESL students did especially well since the language is manageable and they excelled in performing measurements, jotting down data and diagramming. Science is a great equalizer."

Each year Gordon organizes field trips into nature – whether it is observing a forest canopy at UBC Botanical Gardens or exploring the wonders of the intertidal zone at Whytecliff Marine Park in West Vancouver.

"Society moves quickly and we've lost the ability to be quiet and observe nature," comments Gordon. "Children have a natural curiosity about the world and we can foster this by showing them that science is all around us and help them develop a scientific eye through observation."

"Our field trips were phenomenal this year," Hinson said. "At Whytecliff we had a scavenger hunt using clues and pictures to help students investigate and identify their surroundings." Gordon enjoys inviting parents on field trips as she notes that many families are inexperienced at what BC offers and she hopes the trips will give them an appreciation for the natural world and its wonders.

"Teaching hands-on science makes it real for young people and dispels myths that science is boring. I hope students will see that there are many options for them so they can make informed decisions when they enter secondary school."

# Bringing science alive in the classroom

This year, General Gordon Elementary School teachers Nathalie Menard and Bernard Wan teamed up with scientist Scott Morgan to develop Grade 6 lessons on electricity.

Scott Morgan is an electrical engineer with a background as a trainer in industrial settings. "I was looking for an opportunity to mentor young people in science and engineering and the Scientist in Residence program offered a good fit for me"

For the first part of the school year the teachers worked with Scott to create six lesson plans and to purchase and prepare materials for the experiments and demonstrations. "As a generalist it was handy having Scott there to help us develop the lessons and build the materials," Wan said.

"Working with Scott was beneficial on both sides," said Wan. "As Nathalie and I collaborated with Scott in developing the experiments we used his expertise and know-how and as teachers



Teacher Bernard Wan helps a student with a lesson

we showed Scott how to translate the information into age appropriate and student-centred knowledge.

Given a sizeable budget, the teachers purchased materials including cop-



Scientist in Residence, Scott Morgan, oversees students building a speaker in a lesson at General Gordon

per wire, cables and batteries. They ensured most of the materials could be reused thus becoming part of the school's science resources.

"Grade 6 is the year that electricity is introduced into the curriculum and our students were excited to see that the lessons can be applied in everyday life," said Wan.

In one of the lessons the students built rudimentary speakers and connected them to an iPod to hear the sound. "We broke down the ideas of electricity and magnetism in a way that the students could relate to."

Other lessons included electromechanics (buzzer), electric motors, lemon battery, solar cells and a field trip to Stave Falls Generating Station.

As a result of these successful collaborations, a new set of practical science lessons will be added to the Scientist in Residence Program website for use by VSB teachers and the public. [http://](http://www.vsb.bc.ca/vsbprograms/kto12/ScientistinResidence.htm)

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The Scientist in Residence Program is supported by the Vancouver Board of Education and generous donations from the Vancouver Foundation, Rix Family Foundation, CIBC Wood



Teacher Bernard Wan helps a student with a lesson

Gundy (at Richmond and Bentall), Derek Spratt through the BC Technology Foundation, RBC Foundation, Fisher Foundation, NSERC-Pacific, BC Transmission Corporation, Paige Axelrod and Ned Glick, Sara Harris, and Shona Ellis. In-kind support is provided by CANTEST.