# Hooked on science

## Fostering scientific knowledge in the next generation

BY NOA GLOUBERMAN

It's no coincidence that British Columbia's "Year of Science" spans the 2010–11 school year. Launched by the provincial government, this initiative opens the eyes of students in elementary and high school to science and the exciting careers it affords.

"Labour-market forecasts predict that, by the end of this decade, three-quarters of all future jobs in B.C. will need some post-secondary education, and many of the most interesting and well-paying jobs will need a solid understanding of math, sciences, engineering and technologies," said then-premier Gordon Campbell at the official Year of Science launch on September 24, 2010, at Science World at Telus World of Science. The program ends in June 2011.

"By encouraging B.C.' s young people to pursue a better education in science today, we will be preparing them for the jobs of tomorrow and ensuring they have the knowledge and skills to build a strong economy, contribute to a healthier environment and bring about a brighter future for everyone."

"For young people, there are enormous opportunities and a great future in science," agrees Ida Chong, B.C. minister of community, sport and cultural development. She points to the recent BC Labour Market Outlook report showing that demand for labour in science-related occupations will increase faster than in other occupations between 2009 and 2019, with 145,700 new job openings and an annual employment growth rate of 2.4 per cent in the province.

**The Scientist in Residence Program: teaching at L'École Bilingue (shown) and other Lower Mainland schools**

The Year of Science funds science events and competitions throughout B.C. and promotes programs that ignite interest in science among youth.

One of these – the Scientist in Residence Program – has been running in the Lower Mainland's elementary schools since 2004, thanks to financial support from the Vancouver School Board (VSB), Vancouver Foundation, Rix Family Foundation and other organizations and individuals, and in-kind support from several organizations including LifeSciences British Columbia.

Says founder and managing director Paige Axelrood, the program aims "to excite, inspire and support elementary-school children and teachers to discover the world through hands-on science."

"We've all heard of artist-in-residence programs. I thought, What about a similar program for science?" says Axelrood. A scientist herself, she had the idea in 2001 after volunteering in her daughter's kindergarten class. "I saw a real need for something like this in elementary schools, so I continued doing hands-on science with children and teachers in classrooms and began working with Valerie Overgaard, associate superintendent of learning services at the VSB … and in September 2004, the program was launched in three schools."

Scientist in Residence establishes a partnership between a scientist and two teachers at each participating school. Together, they develop at least six hands-on lessons on a specific theme, to be co-delivered in the classroom and on field trips during a six to eight-week period.

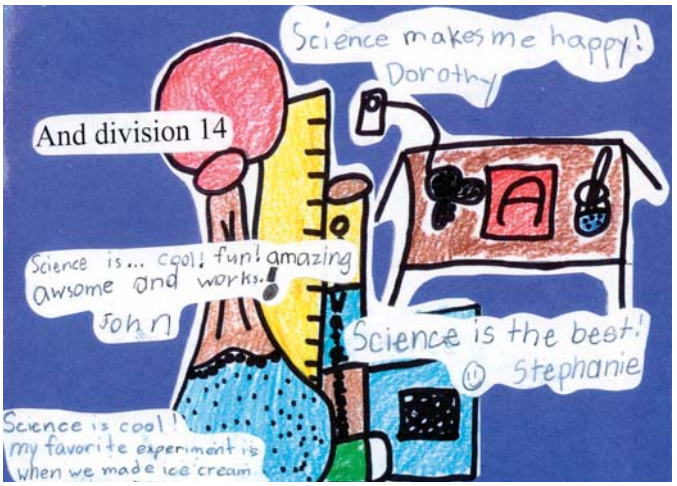
"I wanted children to see that science is all around them and to learn about their relationship with science in a way that's meaningful to them," says Axelrood. "The kids really get a chance to be scientists themselves. They get to make their own discoveries and are given all these opportunities to explore. Getting them hooked on science at a young age, when they're



Photo: Scientist in Residence Program

Paige Axelrood, founder and managing director of the Science in Residence Program, which gets children hooked on science

Photo: Dominic Schaefer Photography




**"Science is cool! Fun! The best!": opinions from Grade 2 students at Vancouver's McBride Elementary School on participating in the Scientist in Residence Program**

naturally curious and like to explore, helps to encourage their interest in the field. My hope is that, as they grow older, they maintain this interest."

The program's benefits don't end with the children: "Through these direct interactions, not only do the scientists become positive role models, but the teachers are able to enhance their comfort level and abilities to teach science." The lesson plans generated by each Scientist in Residence partnership fit the guidelines of the B.C. Ministry of Education and are available free and on line for any teacher to use.

"Working in partnership with a scientist is a great opportunity for elementary-school teachers, who, as generalists, have many demands placed on them," Axelrood says. "It gives [the teachers] a new perspective on how to teach science, not to mention an enhanced science curriculum that they can use for years to come."

To date, 103 teachers, 19 scientists and more than 2,400 students from kindergarten through Grade 7 have participated in the program at 37 schools in Vancouver and one in West Vancouver.

## Prize for the wise

Taneille Johnson, a first-year science student at McGill University, is living proof that early relationships between children and passionate scientists and supportive teachers can have a big impact on later academic and career decisions.

Johnson credits her scientist parents and her teachers with leading her to start competing in science fairs in Grade 2 and allowing her "to pursue and develop" her interest in science."

In 2010, Johnson placed third in the national Sanofi-Aventis BioTalent Challenge for her research into the early-onset aging disorder dyskeratosis congenita.

"At a young age, every child has an interest, like young boys who like cars; well, there's science in that, too," she says, adding that she would eventually like to return to B.C. to pursue a medical degree at the University of British Columbia. "Kids should be able to just go after what they like about science, not just what's on the curriculum. I think that's the key to helping them really build an interest." ■





Photo: Scientist in Residence Program