

# Class favorite Scientist-in-residence a huge success

It's a labor of love for Steve Ralph, a UBC researcher who volunteers his time to teach science to elementary students at Sir Wilfred Laurier as part of the Vancouver school district's fledgling scientist-in-residence program.

He has just wrapped up a series of experiments in his field -- plant-insect interaction -- to kids in Grades 6 and 7. The enthusiasm of the students comes from scientific intrigue, interest and discovery. It's active learning at its best.

"The experiments the students are doing here today are real experiments that we do in real labs," says Steve. "We use them all the time to learn what insects do and don't feed on."

This introduction to science began with a field trip to scavenge for insects and then Steve organized a series of experiments with budworms and loopers, and Laurier's aspiring scientists went to work, learning which insect was a 'specialist' in its eating habits, and which was a 'generalist'. Food sources offered for the insects included cabbage and tomato leaves, and spruce and pine needles, which Steve provided.

The goal, says Steve, is to give the kids an understanding of what's happening out in the real world. "A lot of them may not have the chance to get away from the concrete jungle of the city and actually see interactions that occur in nature. The reality is, it's a balance -- plants need insects for survival, and insects need plants. But from time to time, that balance gets shifted and there's an epidemic."

Such a shift, says Steve, is what led to B.C.'s current pine beetle infestation. "We're trying to make the kids aware that the interactions that happen in nature could influence their lives."

Grade 7 teacher Jeff Shoub says the benefit of Steve's experience is incalculable. "He brings knowledge and

expertise that regular classroom teachers wouldn't have. And he has access to resources we don't. We couldn't do this experiment without him. His level of expertise and knowledge is the biggest benefit to us."



*UBC scientist Steve Ralph explains what to look for in student experiments while students record their observations.*



Jeff says the class has generated an amazing amount of interest from the kids. "The first time Steve came in, we worked from quarter to nine to lunch time without recess, and I didn't hear one complaint, they were so excited about what they were doing." For a veteran teacher like Jeff, that's impressive stuff.

The kids know that they're learning more with such a hands-on approach. Rochelle is in Grade 7 and says, "I absorb it more when I do it like this, first-hand. We learn to cooperate with other people, and to work together. Also, we learn how to take care and respect living plants and living creatures." Classmate Mahyar agrees. "You actually get to see with your own eyes and it's better than a book. There's stuff you can't see in a book."

Judy spent the first years of her life being educated in China. "This is much better because in China they would just tell us about these things. Here, like this, learning science is fun."

Teacher Dan Biela says Steve has helped increase his overall understanding and knowledge. "It's been a real eye opener. It shows teachers how they can use field trips instead of teaching from a textbook. I give this an A-plus for learning."

Steve loves being a part of the school district's scientist-in-residence program. "I do this because I love teaching, and I love working with kids. They have an excitement about science that you don't always see with adults. This could be the first and only time these kids design an experiment and make observations and they're excited about it. They're having lots of fun, and learning exciting things. It doesn't get any better than that."