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Engineering Show And Tell Teaches Elementary School Students

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On a rainy April day, two BC Hydro employees visited Ecole Marlborough Elementary School in Burnaby and did an engineering show and tell exercise for Mr. Prévost's grade three French immersion class.

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Tonia Jurbin, senior geotechnical engineer in Transmission Maintenance Services decided that talking to little kids about engineering might not be as much fun as showing them. She called Nilex Inc. out of Burnaby who supply geosynthetics, which are fabrics and membranes used in geotechnical applications.

Gurch Sekhon of Nilex sent Tonia a box full of erosion control mats made out of hay, straw and coconut that are used to protect grass seed and keep it on the slope until it starts growing, and silt fencing that is used to protect water courses during construction by catching the silt. Unspecified sources sent Tonia enough grass seed to seed the whole schoolyard.

"There is a lot of erosion on the property between the upper playground, and the lower soccer field, and there is a poorly graded ditch that runs along the toe of the slope," says Tonia. "We took a chair from the classroom, put it at the top of the slope and pretended that it was a transmission tower, then we pretended the ditch at the bottom of the slope was a fish bearing stream." Since it was raining the whole time it was a very realistic exercise. It is actually easier to see what is happening with drainage and erosion when it is raining.

In a quick classroom session the children were shown photos of erosion problems caused by different mechanisms; river erosion, poor logging practices and poor drainage, then they were given a quick talk about safety and safety equipment on job sites and in the bush. The session then moved into the field where the class measured the size of the failure, the distance from the 'tower' to the 'scarp' of the failure, and the distance to the 'stream'. After collecting the data and photographing the erosion the class installed a silt fence at the toe of the slope to protect the stream, seeded the slope, and covered it with the erosion mats.

Mr. Prévost said the exercise was 'fantastique', but preferred to let the students elaborate and had each student write a note to Tonia the following week:

- "I really liked what you showed us, I never realized how fun it can be to be an engineer"
- "you made it really easy for us to understand what engineers do"
- "I like all types of grass and dirt, and I loved all the tools"
- "I loved your presentation because I love when people help the earth"
- "the presentation was wonderful and I understand perfectly"
- "I learned a lot of neat stuff".

Wendy Kaiser, environmental officer with environmental support services was on hand to help with her knowledge of habitat protection, silt fence installation, and her skill as a really loud whistler to get the kids' attention.

"I love working with kids of this age because they are interested in everything, especially if you are a stranger to them," Wendy says. "I've never had so many volunteers pound in stakes for me. Kids are often told that they are too little to do things, I think we showed them that no one is too little to make a contribution. I believe that they appreciate water they never thought about before, even the water in a ditch in their schoolyard. The kids

now understand that whatever we do impacts fish. There is a new awareness, and that's how it starts."