

# CONNECTING

## TO THE

**T**eachers from five school districts in Greater Vancouver participated in a full-day environmental education workshop in February sponsored by *FORED BC*. The workshop was designed to give teachers an opportunity

to work with specialists from all natural resources sectors and return to their schools with a variety of teaching resources and tips to be shared with their colleagues.

Featured speakers from forestry, mining, agriculture and fisheries engaged the

ing their competence in environmental education (see *Teachers tell FORED...on page 14*). Ziola then presented an overview of the continuously evolving links between a diversifying forest sector and a diversify-

ing curriculum.

Her presentation emphasized that a contemporary understanding of the changing forest industry would help teachers

make a connection between the industry and the types of careers and general interests of students in urban areas.

While the typical media image pertains to harvesting and primary wood processing, Ziola pointed out that to these familiar careers, one can add new forestry careers in fields as diverse as satellite imagery, biotechnology and social sciences. She concluded with an overview of curriculum resources available for teachers from *FORED BC* on all aspects of the industry.

Dr. Craig Orr, a behavioural ecologist who is a consultant to the Aboriginal



teacher audience in discussions on issues and trends, and their connection to the classroom.

Cheryl Ziola, Director of Education Services of *FORED BC*, led the teachers in an icebreaker session where each spoke about their motivation for improv-



# TEACHERS

## ENVIRONMENT

Fisheries Commission, spoke on the theme of *Sustainable Fisheries – History and Future Solutions*. Drawing on 10 years of experience promoting the conservation of wild salmon, Dr. Orr illustrated how a once-limitless resource of salmon has become threatened through a combination of bad planning, ignorance and greed. To illustrate the scope of the problem, he cited an experiment which demonstrated that of every 100 salmon which made it out to sea, only two returned to spawn, and that was without being exposed to fishing! In addition to over-fishing, Orr said that some of the past practices that had placed salmon at risk included logging to the edge of stream beds, a practice he says does not occur today. He aimed as much responsibility at government programs, pointing specifically to a \$500-million federal hatchery program, which he said was designed to create “homogenized or plastic fish.” In the process, says Orr, “We went off willie nillie and created a number of genetic problems and feeding problems in the lifecycles.”

In response to questions from a number of teachers about Atlantic farm salmon, Orr said that there are some concerns among First Nations and others about reports on escapes of those salmon, which would then compete with natural species. He added, however, that the industry is working towards a completely closed-link farming system, and will not create breeding stock until this is done.

Referring to long-term issues, Dr. Orr said that as much as “over-fishing and greed” have their impact on the fish population, the larger issue is global warming in terms of its threat to fish survival. Said Orr, “We’re fiddling with a Mac truck when there’s a DC-9 coming down the road.” In concluding, he said that the darkest day for BC fishing was the day that traditional, selective aboriginal fishing was banned in 1935. It is slowly being re-introduced and the concept is spreading, a bright spot in Orr’s view for the future of the salmon fishery.

Lindsay Babineau, Program Coordinator for the BC Agriculture in the Classroom Foundation, gave an apple to the teachers to help them understand agriculture in a global context. Teachers were asked to cut the apple in sections until all that remained was 1/32 of the fruit. That fraction, she said, represented the area of the earth that supports the food needs of mankind.

Babineau, a former teacher, familiarized the teacher-audience with a number of resources produced by Agriculture in the Classroom, with the goal of improving teacher and student understanding of this industry. The resources include three lesson books entitled *Beans and Their Buddies*, *Soil Secrets*, and *Grow BC*, as well as two videos entitled *Promise of the Lands* and *Growing for the Future*. The Foundation has recently produced an agricultural careers CD-ROM, available for BC teachers. The Foundation also conducts a summer institute for BC teachers at UBC (see *Landscapes* Volume V, Winter 98/99, page 11), which is a three-credit program.

Participating teachers explore practical ways to integrate concepts related to food growing, food safety, food processing, nutrition and sustainability with the learning outcomes of various BC curricula.

Babineau cautioned teachers that the most important rule in teaching environmentally sensitive units such as agriculture was not to preach to the students. Her own experience illustrates the importance of taking a balanced approach. Some of her former students now sit on the board of an advisory committee of growers and dairy farmers to which she now reports.

The luncheon speaker was Jim Wiese, Director of Science and Education for Science World. Wiese, a former teacher, has a background that encompasses authorship of books, consulting to the province’s largest utility, and a Hollywood stint (see *Landscapes* Volume IV, Fall 1998, page 14). He emphasized the importance of environmental literacy if students are to eventually participate in important decisions as BC citizens. To illustrate, he described a new initiative at Science World called *Mine Games*, a student environmental choice program funded by Environment Canada. The program involves computer simulation that allows students to take actual satellite data showing Vancouver as it looks today, and then build in variables for the next 40 years in areas such as housing, environmental conservation and economics. Through participating in the process, students learn the impact of their decisions. Wiese used

the example of students who select a 40-year moratorium on economic development and then find that that translates into 30 per cent unemployment

Grant Trump

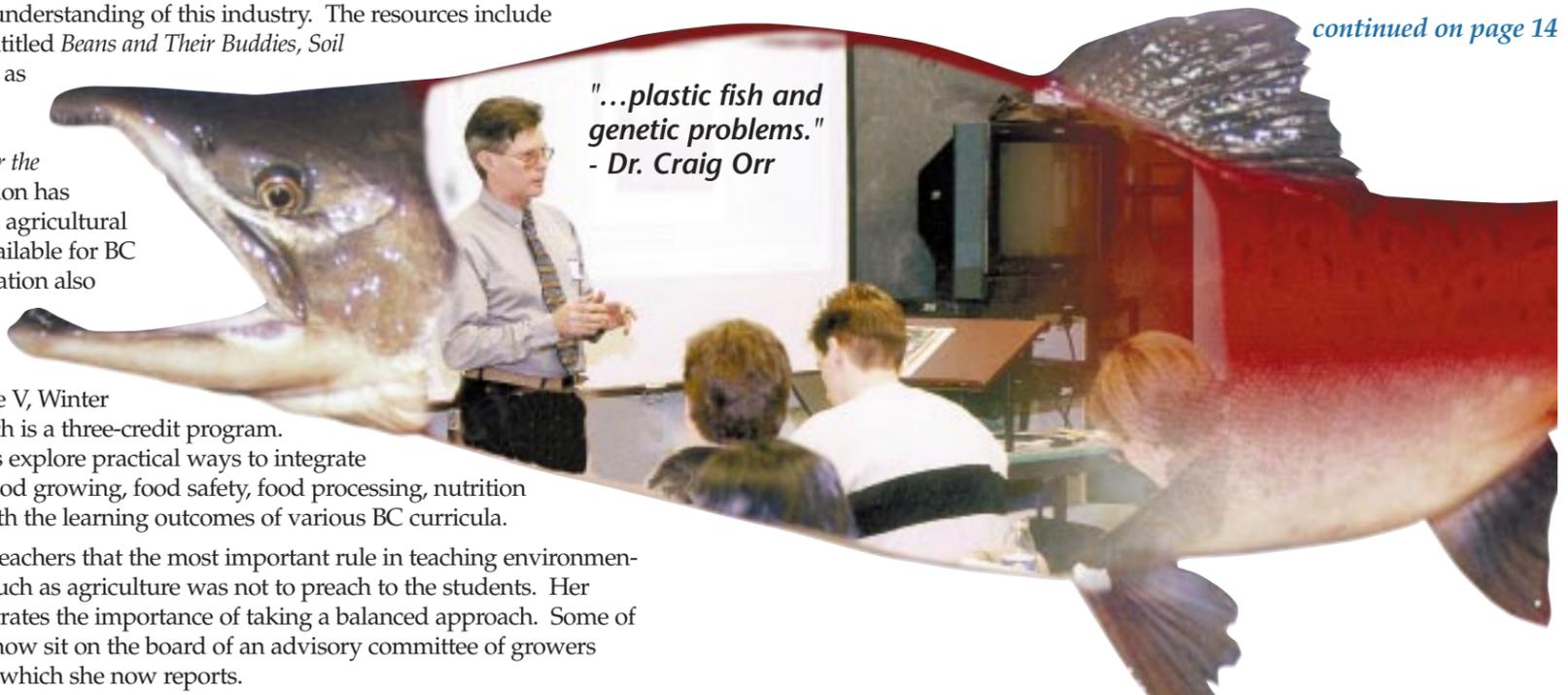
A crystal-clear message on mining for teachers.

with social problems and family violence. “A lot of kids go back and change their answers,” he said.

The Mining Association of British Columbia was represented by Dave Meronuk, a teacher at Montgomery Middle School in Coquitlam, and an active consultant for the education programs of the Mining Association. Meronuk screened a video that had recently been produced by the Association for a teacher audience, and in which he had a direct role as a consultant producer. In the video, students from the Coquitlam School District interview mining executives and government regulators in order to find out for themselves the success the mining industry has in reclaiming mine sites. The video will soon be in circulation along with a wealth of resource materials already produced for teachers by the Mining Association.

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“...plastic fish and genetic problems.”  
- Dr. Craig Orr



These materials include:

- a Social Studies 10 Resource Unit on mining that discusses mining from exploration to environmental practices
- the Science of Mining Unit, which covers all phases of mining with hands-on experiments, and fits the Grades 8-11 science curriculum
- the Earth Science 11, Geology 12 Resources and Ideas Project, which is a compilation of lesson aids collected from teachers around BC
- the K-3 Rocks and Minerals Integrated Science Unit, which is a box of posters, rocks and resources for younger students
- A career video entitled *Careers in the Minerals Industry*

The workshop concluded with a presentation by Grant Trump, Executive Director of the Canadian Council for Human Resources in the Environment Industry. Trump's presentation (*see cover story*) brought together two important lessons for the day. First, the natural resources sector has created an exciting and expanding array of career opportunities for the next generation in environmental fields. The second lesson is that these opportunities and the environmental benefits associated with them can only be accessed by those students who stay in school.

Our natural resources will be in the hands of our most valuable resource, our students.



Land reclamation:  
like putting the chips  
back in the cookie.

## TEACHER COMMENTS ON *FORED* WORKSHOP

- "I enjoyed Dr. Craig Orr's deep concern, experience and academic expertise."
- "Jim Wiese was short, sharp and to-the-point – the resources were plentiful."
- "Grant's presentation will help me get a career prep environmental education course going."
- "The forestry resources and information packages supplied were great."
- "Lindsay Babineau's presentation was very useful and raised lots of good issues."
- "The mining presentation was very relevant and provided a great starting point."
- "I appreciated the diversity of presentations on environmental issues."

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## TEACHERS TELL *FORED* WHY THEY WANT ENVIRONMENTAL EDUCATION WORKSHOPS

"To collect ideas and resources that will enrich students' knowledge about the environment."

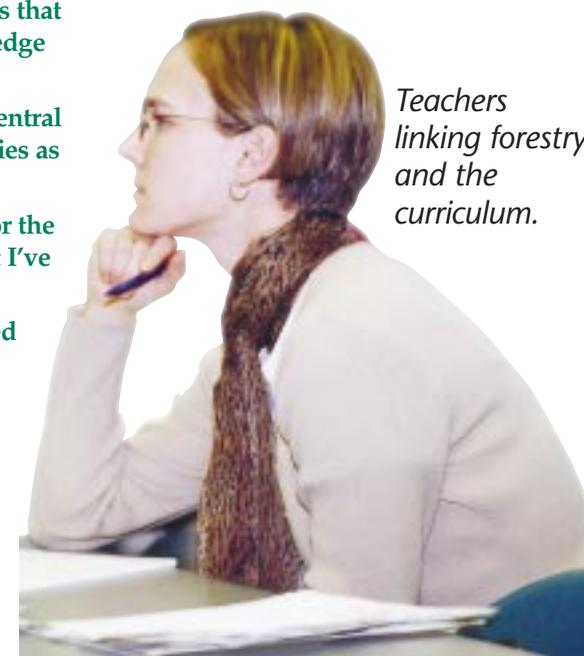
"Resource management is a central theme in general social studies as well as Geography 12."

"To get resources and ideas for the integrated environment unit I've got planned for this year."

"To hopefully gain a two-sided perspective on the environment, preservation versus development."

"To learn more about forestry activities and units."

"To learn how to present a mining unit."



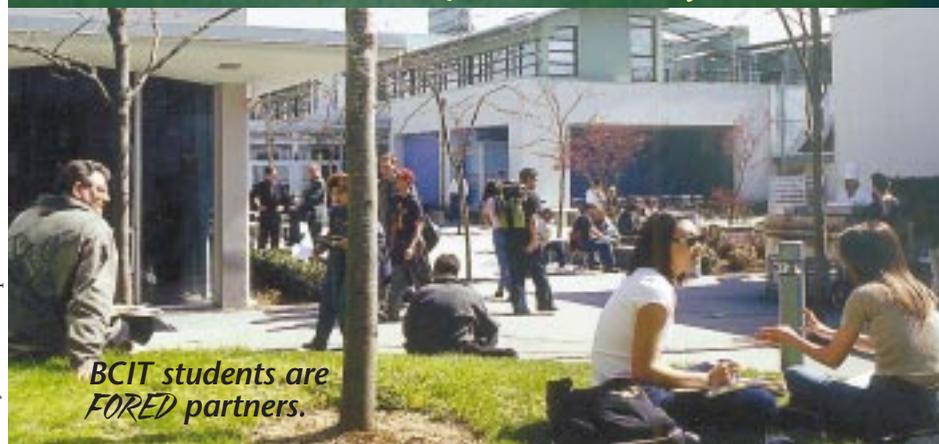
Teachers linking forestry and the curriculum.

"Environmental education is citizenship education in British Columbia," *FORED* President Victor Godin told teachers attending the Environmental Education workshop. He explained that an understanding of the economic, cultural and environmental importance of BC's natural resources was a fundamental requirement of informed citizenship in the province. "Effective citizenship education, a shared goal among all those involved in the education system, cannot occur without a shared commitment to environmental education."

*FORED* acknowledges the funding of the **DOW CHEMICAL COMPANY** in bringing this workshop to BC teachers.



## Teacher for a Day



BCIT students are *FORED* partners.

*FORED* BC has entered a partnership with BCIT students enrolled in natural resources studies which will lead to a program of classroom presentations in Vancouver elementary schools beginning in September.

The BCIT students can draw upon their studies to inform younger students about a range of topics covering many aspects of resource management in BC. *FORED* BC will provide the students with training in how to make presentations that are relevant to curriculum outcomes and free of bias.