What are the stereotypes for young environmental activists? Images that come to mind are tree huggers, tree hangers and protestors who crash shareholders’ meetings or stage street theatre for the media. A new breed is emerging, soft-spoken, politically astute high school students who dress like business types, shun civil disobedience and use information technology to reach global audiences.

Simon Jackson, a West Vancouver student who leads the Spirit Bear Youth Coalition, is part of the new breed. His 600-member organization wants to save 250,000 hectares of BC for the Kermode or Spirit Bear and their efforts are getting the attention of politicians, business leaders and world media. Landscapes interviewed Jackson after one of his school presentations, which are part of a strategy to mobilize the political energies of students.

continued on page 7
The industrial revolution was almost 200 years old before big business started giving back in a serious way. Major foundations like Rockefeller and Carnegie led the way with momentum really starting to gather after the Second World War.

It has taken the new high-tech community just a little over ten years to take its place in the giving circle alongside the major players in the traditional economy. A high profile example is the Bill Gates Foundation, a $21 billion charitable trust equivalent to the entire budget of the government of British Columbia. But some lesser-known dot.com billionaires are funnelling their fortunes back into the community and education appears to be the charity of choice. One example is Jim Barksdale, former chief executive officer of America Online, who sold his shares in the company for $700 million last year. Barksdale has ambitious plans for the money. He intends to give it away. True to his word, he started last year with a $100 million contribution to address literacy problems in his home state of Mississippi. The money was allocated to the Barksdale Reading Institute, a state-wide initiative to train teachers and motivate parents in developing literacy skills among youngsters.

Barksdale Beyond the condition that measurable results be achieved in the program, implementation is completely in the hands of the schools. Instructors have time to take reading instruction classes. The performance conditions attached to the endowment did not include an active direction of state education policies by Barksdale. Beyond the condition that measurable results be achieved in the program, implementation is completely in the hands of the schools. Instructors have time to take reading instruction classes. The performance conditions attached to the endowment did not include an active direction of state education policies by

Is this any way to battle illiteracy?

The low reading scores in the state of Mississippi offer ample scope for improvement. Of the 40 schools participating in the Barksdale Reading Institute program last year, students in half of them are in the lowest quartile on nationally standardized reading tests. In one participating school for example, 55 per cent of the third graders achieved that ranking, not surprising in a school where 90 per cent of the students receive free or reduced price lunches. Speaking of his reading challenged students, the principal said “they had never seen a book before.” The school received a grant of $198,000 US to train classroom teachers in reading, as well as hire liaison workers to visit the homes of poor students. They provide books to parents and encourage them to read to their children. The grant also covers the cost of teacher salaries for an extended school day, so that they can have time to take reading instruction classes. As a further incentive, teachers can win expense paid out-of-town trips to reading conferences if their students’ reading scores improve.

In a state where 50 per cent of the adults are functionally illiterate, the path to the information highway and the riches it promises will start with a fundamental piece of information technology. The book.

From The Readers

Since the last issue of Landscapes, we've received a number of responses from our readers. Here are excerpts from some of these letters:

“I am a newly graduated teacher from the UBC education program. I would appreciate a subscription to your magazine. I’m always interested in new teaching ideas.”
- Sonja Corea, Kamloops, BC

“The Landscapes newsletter will be a great addition to our resource centre.”
- Joanne Norman, Fraser River Discovery Centre

“You Landscapes newsletter is really extraordinary. Thank you for sharing it with us.”
- Amy Krause, Evergreen Theatre Society, Calgary, AB
The Hostess Frito-Lay company has a proposal targeted at Canadian schools to help them address funding problems. Schools can generate a profit as high as $28,800 per year through a program called Cash in Your Chips, through which students sell the company’s snack foods on special days. To realize this level of profit, schools would have to sell 360 bags of potato chips per day through the 40-week year. The company promises a more modest goal of $2,304 profit in a year for schools that can reach a target of selling 144 bags of potato chips per week.

The promotion offers a free school start-up kit which includes inventory sheets, a display rack for the company’s products, a cash box and two complimentary aprons containing the Hostess Frito-Lay logo, which are described as student uniforms. According to the promotional materials, participation in the program is seen as “an everyday student development opportunity” that offers practical business and profit experience for students. The promotion materials are accompanied by detailed nutritional charts, which inform teachers that students between the ages of seven and 18 can obtain up to 36 per cent of their recommended daily intake of vitamin C from 50 grams of products such as dill pickle flavoured potato chips. To those who might be concerned about the presence of snack foods in schools the pamphlet advises, “it is unrealistic to think that school age children and young adults will always satisfy their snack cravings with a helping of fresh fruit or raw vegetables.”

When Auguston School in Abbotsford, BC opened this year, it was the first to be built and financed by a residential subdivision developer and leased back to the school district for 20 years, with an option to purchase. The concept is called a public-private partnership or PPP, whereby the private sector makes an investment in a public facility and the investment is paid back by government through a lease or other payments spread over several years. In the expectation that PPP agreements may be used to build future schools in the province, the Society for the Advancement of Education will release a study on the Auguston School this spring to be undertaken by Dr. Daniel Brown, Professor of Education Administration at UBC. The study will examine questions including elements critical to the success of PPP arrangements, as well as key actors and factors in the establishment of PPP.

The Vancouver Elementary School Teachers’ Association has expressed concern with the announcement by IBM late last year of its intention to withdraw from marketing all IBM Kindergarten to Grade 12 courseware programs. The company is at the mid-point of a three-year partnership with the Vancouver School Board and the products affected are its NetVista and School Vista training classes for teachers, which are to be discontinued. Some trustees on the board have questioned the expenditure of $1.4 million, over three years, on the IBM School Vista program, which has been placed in 17 elementary schools. All Vancouver elementary schools use the NetVista program as a management tool. The Association also warns of a backlash from parents who have been participating in fundraising programs to support this partnership, only to learn that the training classes for teachers to apply this technology are to be discontinued.

Commenting on the larger issue of technology in the classroom arising from this issue, the Association says that “computers have been overhyped and oversold in the education community” and have displaced basic teaching tools such as text books “in the competition for scarce resources.”

**Rules For Partnerships**

The Canadian Teachers’ Federation has sounded a note of caution for school boards contemplating entering corporate partnerships at a time of reduced funding for curriculum development. The Federation warns that any materials intended for the classroom should be subjected to close scrutiny for accuracy and completeness, objectivity, commercialism and stereotyping. It adds that the names of sponsors of curricular supplements should be stated clearly on all packaging and that school officials, administrators, teachers, parents and students should be given the skills to help them conduct critical analysis of curricular materials.
A survey conducted by the British Columbia Teachers’ Federation to determine the extent of corporate involvement in the BC school system drew response from almost half of BC public schools. The BCTF undertook the survey in order to assess the extent of corporate involvement in the BC school system. The survey found that nearly every elementary school in the province was involved in corporate sponsorship, with many schools receiving donations from corporations. The survey also found that more than two-thirds of BC public schools have a book sale sponsored by another company. Funds generated from book sales in individual schools exceeded their annual library budget.

IN BC SCHOOLS

Nine out of ten secondary schools in BC were found to have at least one vending machine, while one in three elementary schools has one. About three in ten schools were tied to an exclusive beverage contract, with more than two-thirds of secondary schools in this position. Students at 61 per cent of elementary schools collect labels, box tops and other materials as part of what is described as “a corporate incentive program.”

Advertising on scoreboards was reported by eight per cent of schools and eight per cent have ads elsewhere in the building. About 34 per cent of schools in BC participate in programs sponsored by Oreo Bay, such as the Read to Sucroo and Stay in School programs. The survey also found that 28 per cent of schools use curriculum materials from forest companies and 13 per cent use mining industry materials. About one in four schools have a corporate donation of computer hardware, with the survey reporting that schools in areas with higher socio-economic status receive a higher level of contribution.

The survey also found that 50 per cent of private food operations in British Columbia schools do not provide revenue to the schools in which they are doing business.

SURVEY ON BUSINESS

For years of rhetoric and resistance, it has become fashionable for corporations and their lobby groups to be seen as making peace with their former environmental critics. By the same token, some environmentalists relish their new role as advisors to their former adversaries.

This is not a new idea. In 1913, Henry Ford was a billionaire, at a time when there was no income tax and the average pay was ten dollars a week. Ford loved birds. He made a point of buying hundreds of acres of forested land around his massive factories and turning them into private bird sanctuaries so he could watch his charges through a telescope from his office window.

Consequently, he was deeply stung when America’s most famous bird naturalist, John Burroughs, wrote an article complaining that Ford’s noisy cars, to be found on all of America’s back roads, were frightening birds in their natural habitats. Henry Ford’s response was to send the 75-year-old Burroughs a free car. After getting over the terror of the new contraption, Burroughs learned to drive and found that the vehicle actually brought him closer to his beloved birds.

A close friendship developed and Ford decided to play in the environmental big leagues. A bill had been sitting before the US congress for four years, which would provide, for the first time ever, for the protection of migratory birds in America. There was no political will to pass it. Ford ordered his network of car dealers across America to rally school children to deluge their congressmen with letters. After a one-year campaign, the first species protection bill of its kind was passed.

Almost 90 years later, his great-grandson, William Clay Ford, has taken over the chairmanship of the giant automobile company. He was described in a leading business magazine as “an unapologetic environmentalist”. One of his first steps in taking over the Ford Motor Company was to pull the corporation out of a group called the Global Climate Coalition, a business lobby group that opposed the theories of global warming. He has also created a new environmental division in the company called THINK. The division will create an offering of “environmentally friendly” vehicles including an electric bicycle, which will be available in Canada this year and will be able to travel at speeds up to 25 kilometres per hour.

Like his great-grandfather, Bill Ford has discovered that environmental causes can reach all the way to the command posts of industry, and offer opportunities to demonstrate leadership unavailable in the marketplace.

FIRST STEPS IN FINANCE

When the Canadian Bankers’ Association reviewed online financial education resources, designed to help Canadian students learn about their financial world, it discovered there was no single Canadian source of comprehensive information. Instead, it found that educational information on money through the Internet was incomplete, broadly distributed and quite often based on American experience. As a result, Canadian banks launched two initiatives.

The first was a website on basic money management aimed at young Canadians called There’s Something About Money. The website is based on a national in-class seminar program with the same title. Designed for Grade 11 students and above to help them prepare for their financial future, the site has received over two million hits in its first year with students staying on for an average of 21 minutes. The related seminar program has been attended by over 5,000 students in class since its launch.

The second initiative called Your Money Network pulls together an integrated batch of websites that contain online financial resources for Canadian youth. The guidelines for selecting the websites were neutrality, objectivity and a strong information base. Other partners in the program include the Royal Canadian Mint and the CBC’s award-winning television program Street Cents.

To help teachers, school librarians, parents and students work their way through the over 800 financial topics available on the integrated website, the Bankers’ Association has created a search tool or resource guide. The 800 resources are packaged under 50 topic areas including subjects such as privacy, technology, post-secondary education and the stock market.

The site can be accessed at www.yourmoney.cda.ca.
A PARTNERSHIP OF MEMORIES

A large and important part of Canada's history is contained in millions of fragments distributed among the memories of the country's senior citizens. Pulling this history together through a process that links students and senior citizens through information technology is the goal of Generations Can Connect, a Government of Canada project in partnership with the CBC. The organizing principle of the program is simplicity itself. Students interview older people and compile a database of their contributions to the development of their communities and their country.

For teachers wishing to get involved in the program, the first step is to discuss it with their principal and a school board consultant to determine how it can help them achieve curriculum goals. Instructional materials are available on the Generations Can Connect website at http://generations-canconnect.ic.gc.ca. Next, following the program’s suggestions and privacy guidelines, students contact individual seniors to begin personal interviews. The person interviewed can give their permission to be photographed or have a treasured historical object in their possession photographed, with the photos ultimately being scanned into digital form. For each interview, students write a 150-250 word profile of the senior and the object or the event the senior describes. They can also create a website on their school’s server or add their material to the Generations Can Connect server. Ultimately, the seniors are invited to the school to see the results of the interview and give their final agreement before the stories are published on the website. An added dividend is that it introduces the seniors to the use of the Internet.

The program is seen as facilitating curriculum outcomes related to community values, social and cultural studies, language arts, computer and multi-media skills. It provides access to participating schools for grassroots development of “free, critical and leading edge” communications training and services to Canadian civil society organizations.

The Institute for Media, Policy and Communications Training (IMPACS), is a registered non-profit organization with a goal of helping build stronger communities by providing communications training and services to Canadian civil society organizations. These are defined as organizations in the charitable and non-profit sector. The organization’s goals are to provide full-service communication training, foster the development of “free, critical and effective” media worldwide, enhance the media’s role in the process of good governance and public sector accountability, and explore ways to expand the contributions of non-profit organizations in Canada.

IMPACS cautions that media virus that will engage this generation in citizen action and participation requires a high degree of sophistication, including

CORPORATE TRAINING FOR MATH TEACHERS

The British Columbia Association of Math Teachers has entered a partnership agreement with Texas Instruments Canada Ltd., which will provide training for up to 20 mathematics teachers, who in turn will act as trainers for teachers over the present school year. The goal of the partnership is to support the professional development of teachers pertaining to hand-held graphing technology in the classroom in various regions of the province.

The trainers undertook an intensive three-day workshop sponsored by Texas Instruments in August and during the fall conducted workshops in their regions to help teachers integrate the latest graphing calculator technology in the mathematics classroom.

STUDENT SALARY EXPECTATIONS

A survey of 3000 undergraduate students at 20 Canadian universities conducted by pollster Ipsos-Reid on behalf of the Royal Bank found that students expect to be making $264,000 a year by retirement, but do not expect their jobs to take over their lives. Salary expectations for undergraduate students approaching the workforce with three years of university training are in the order of $46,000 a year to start.

The survey also asked students to rate the most popular companies in Canada and the resulting responses show Microsoft garnering, 36 per cent of the votes, closely followed by Noratel at 35 per cent and with 31 per cent for Royal Bank.

A bank’s spokesperson said the survey is partly intended to help the bank in its on-campus recruiting drives.

FARM SCHOLARSHIPS

Last year, Monsanto Canada Inc. awarded 60 high school students from across Canada with scholarships of $1500 each to enter first year post-secondary studies in areas including agriculture, forestry, business or biotechnology. The scholarships are made available to Canadian high school students from agricultural or forest family farms.

Monsanto is a leading manufacturer of agricultural supplies including genetically modified farm products.
CANNED LEARNING

Lost in the lofty debate about commercial products in the classroom is the everyday reality, which sees teachers using household products as teaching tools. Two science experiments offered in the Journal of the BC

Science Teachers’ Association provide a case in point. The first, for Kindergarten through to Grade 7, is called the Great Soup Can Race. Students are invited to bring various brands and sizes of soup cans to the classroom and roll them down a ramp to measure the distance and velocity. Variables such as the weights of the cans and the angle of the ramp are introduced to mix the results.

The other experiment is called the Cola Taste Test. Students bring three or four varieties of cola to the classroom, conduct their own taste test and are invited to design their own procedures in order to have fairness. At a time when teachers are chasing scarce dollars for classroom materials, the kitchen pantry has become a learning resource.

In order to use the Internet “without falling asleep waiting for a site to arrive” Anderson suggests teachers would need a 486dx-66 with 32 megabytes of RAM. A move up would be a donation of the early Pentium family and Anderson knows where to shop. “Occasionally you will find a bank or law firm willing to unload Pentium 166s,” he says. He adds that computers from banks or forest companies may contain Windows or other applications, but suggests that teachers format all hard drives so as to start without virus problems.

The Vancouver School Board does not service donated machines because of their unknown history. Anderson cautions that patience is important. “Do not despair if odd things happen such as disc drives dying, monitors going dim or a variety of freezes, crashes, lock-ups, and even smoke billowing out of the back fan exhaust.” His rule of thumb is that if eight out of ten donated computers function, teachers should “count their blessings”.!

VENTURE PHILANTHROPY

Not unexpectedly, high-tech billionaires, who have seen their industry go from obscurity to economic dominance in little over a decade, take a results-oriented approach to their giving. In an industry where fortunes are made in months, there is little appetite for funding causes year after year, simply because the ideas are inspirational. Instead, they negotiate three-year business plans with recipient charities with clear, mutual objectives. Steve Kirsch made a $70 million contribution to the Silicon Valley Corporation. The money sits in a special fund within the Community Foundation of Silicon Valley last year, when he sold Infosleek to the Disney Corporation. The money sits in a special fund within the Foundation targeted for the education and child welfare.

In Seattle, a group called the Social Venture Partners consists of 275 high technology managers and executives, each contribute a minimum of $5,400 annually for two years to be distributed to non-profits specializing in education and child welfare. Social Venture Partner Funds, which have spread to other American cities involve more than passive giving. The contributors take an active part in bringing their management skills to the non-profit organizations who often lack the business experience required to reach their goals. Venture philanthropy may be intimidating to traditional non-profits accustomed to receiving money from members and donors for the cause they represent, rather than what they are doing about it. To those willing to commit themselves to measurable results, the funding potential is enormous.
Resourceful People

The New Environmentalists... continued from page 1

Jackson: We appeal to youth because our mandate is to ensure youth have a voice in this issue. As for our adult members, we attract a more conservative audience because of our stance of being part of the solution.

Jackson: How do you convey your message to governments?
Jackson: We have spearheaded a letter writing campaign by taking our presentation to schools, service clubs and conferences. We encourage the audience, generally students of all ages, to participate in the land use process and since September, have initiated more than 15,000 letters from young people to the premier. As a result, the media have focused on us, bringing the issue to more than 63 million people worldwide.

Jackson: How do you distinguish yourselves from the tactics used by some youth environmental groups?
Jackson: The Coalition’s mandate is to protect a 248,000-hectare swath of land for the Spirit Bear, while not crippling the forest industry. We are not against logging and do not support civil disobedience. As a result, we are regarded as conservative conservationists. Our approach is to convince the unconvinced, dressing in suits, attempting to gain support from the more right-wing members of society.

Jackson: How has information technology changed environmental crusades?
Jackson: The Internet is a key awareness tool. Since October 31st, our site has had close to 16,000 hits, generating not only awareness, but also creating a worldwide youth base of support, making this a truly global issue.

Jackson: What would you say to the small town logger who says your activities are threatening his future?
Jackson: Small, one-industry towns are the ones that will be the hardest hit if the Spirit Bear land is logged. If we liquidate all of our assets for quick cash, we basically cut our nose to spite our face. In this case, if Western Forest Products logs the area in a 20 year sweep, as is planned, what will the community do for jobs after the trees are gone? If history is any indicator, with no trees to log, more often than not, the forest companies move on to other areas, as it takes 80 years for a second growth forest and 360 years for the preferred old growth forest to regenerate. And as a result of clear-cut logging, the fishing industry will be negatively impacted and the possibilities for a strong eco-tourism industry would be eliminated.

The legacy for my generation would be ghost towns and dead zones. However, if we protect some areas, then there is the option for alternative industries to sustain these small communities for generations to come.

Jackson: In your view, is there a place for a strong resource industry in BC’s future?
Jackson: There is a place. There must be. But I believe to continue having a resource industry, as the centrepiece of the BC economy is foolhardy. Essentially, BC is at a crossroads; if industry continues to operate with short-term goals, it will more than likely run itself into the ground and take the economy with it. As Robert Kennedy Jr. says “the present shouts, the future whispers.”

Dead zones and ghost towns for our generation

Young letter writers
In his day job, Dr. Reg Mitchell is a synthetic organic chemist, heading a University of Victoria team trying to create new molecules whose properties change when exposed to light. They could be used he says “as optical switches in devices such as computers”.

For the past 25 years, Mitchell has had an alter ego; a green-haired scientist called Dr. Zonk, who has exploded, literally, into the classrooms of 40,000 high school students. His demonstrations, full of smoke and noise are designed to show students that chemistry is fun. But there is a serious side to Mitchell’s show. He wants students to understand the importance of chemistry in their lives and provide some balance for the negative perceptions of chemistry they often glean from the media.

Mitchell was awarded the Science Council’s Eve Savory Award for Science Communication in recognition of his dedication to improving science awareness.
IMPROVING SCHOOL ACHIEVEMENT

Research shows students’ home backgrounds are responsible for roughly half of their school achievement. The finding is put forward by Rebecca Jones, writing in the American School Board Journal. A number of national programs are established to provide pre-Kindergarten resources for new parents to help them play a more positive role in their child’s development. One of these programs, Parents as Teachers or PAT, offers new parents personal visits by trained parent educators to help them work on language skills as part of their pre-school foundation. Since 1965, the state of Missouri has required all school districts to offer the program. The underlying principle of pre-Kindergarten support services is that in order to improve education performance, it is essential to start early.

A second strategy to improve performance involves a focus on reading and math. The author says research indicates that children who aren’t reading at grade level by the end of first grade face eight to one odds of ever catching up. Early intervention is strongly recommended, including testing at the Kindergarten level for children’s ability to recognize letter sounds (apparently one out of six children cannot do this) and to test again in the middle of the first grade to be sure they are reading independently.

When a high school in Pasadena, California found that only two of its incoming students scored above 80 per cent on algebra courses, it faced two choices. Either it could, “herd everyone into math for dummies” or make sure that Grade 9 and 10 students mastered the math skills they missed earlier. They did this by imposing two math courses every semester. The pay-off came when the school’s student’s scores on standardized math tests jumped from the 80th percentile to the 97th percentile. A third strategy involves bringing in trained tutors. In a program called Success for All Schools, teachers who are trained as reading tutors spend half their day in classrooms and the other half working with individual students in 20-minute sessions. Promoters of the program believe that while it is expensive in the short-term, it is a cost-effective alternative to long-term special education and remedial services throughout the student’s school life.

Another strategy for performance enhancement of students involves investing in teachers. A 15-year study at the University of Tennessee found that the quality of teaching in a student’s past accounted for differences in standardized test scores of as much as 50 to 60 percentile points. For school quality of teaching in a student’s past accounted for differences in another study, the difference between the students of different teachers, the author has alternative suggestions. She suggests that through the student’s school life.

...a cost effective alternative to long-term special education.

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the differences were still reflected years later in the seventh and eighth grades. Another study by the Educational Testing Service (ETS) in American inner-cities found that fourth graders in classes of fewer than 20 students were about three-quarters of a grade level above those of their counterparts in larger classes. In suburban schools, smaller classes put kids ahead of their classmates by one-third of a grade.

Spending more time learning is a key contributor to student performance according to Herbert Walberg, a professor of education at the University of Chicago. Walberg reviewed 130 research studies, which he summarizes as “the more you study, the more you learn”. He suggests there are lots of ways of adding to learning time including longer school days, longer school years and remedial homework. Says Walberg, “American students are severely handicapped in having 180 days (approximately the same in British Columbia), as opposed to 210 in Europe, 240 in Japan and 240 in Korea.”

Setting goals and assessing student’s development is an additional assessment tool. But assessment programs are dismissed as meaningless without accountability, according to Allan Odden, a University of Wisconsin Professor and Director of Policy Research in Education. Says Odden, “Accountability means that you identify your most valued results, you measure them and you provide incentives or sanctions”.

The final prescription for improving student performance involves supporting professional development for teachers. A report from the National Commission on Teaching and America’s Future criticized many professional development days as “drive-by workshops”, which waste the teacher’s time.

In Ontario, about 32,000 special needs students are waiting for assessment or help, some for more than a year. Fewer schools have a full-time principal or secretary and the number of teacher-librarians has dropped 15 per cent over the past year in some boards. About one-third of school libraries are only open part-time.

— Report by People for Education, Ontario, June 2000

It costs at least $3,000 annually to educate a healthy student versus $15,000 to educate an addicted student. The largest health threats to young people have been identified as abuse, stress, teen pregnancy, accidents and drug abuse and estimates are that ten per cent of young people are in critical situations.


A majority of students (56 per cent) believe Canada will have a number of private universities by the year 2025, however 48 per cent do not think such institutions will improve access to higher education. In the same survey, the majority of students (68 per cent across Canada) say they expect to have at least five employers during the course of their careers.

— Centre for Research and Information on Canada, Spring 2000

The number of career programs to provide Grade 12 students with entry level skills for trades grew from 12 in 1979 to over 2,500 in 1998. For the last year reported, there were approximately 45,000 students enrolled in career preparation programs, 2,000 in co-op programs and 400 in secondary school apprenticeships.

— Ministry of Education, July 2000

continued on page 16

continued on page 16
The following excerpts from PSAs and other non-PSA education organizations, such as the Principals’ and Vice-Principals’ Association (BCPVPVA), are taken from correspondence, newsletters and opinion columns. While some comments originated in teaching group newsletters, they may not necessarily reflect the official views of that organization. Readers are encouraged to contact the source directly for verification or further information.

E-MAIL NETIQUETTE

The following tips on e-mail netiquette are offered by the BC Business Education Association.

• It is considered boorish in some circles to have an e-mail signature longer than four lines.
• Keep the lines of your message well under 80 characters.
• For personal correspondence, no one should forward your mail elsewhere without your permission.

HISTORY IS HISTORY

In a letter to the Student Assessment and Program Evaluation Branch, Richmond teacher, Dennis Begin, takes issue with the watering down of the History 12 course. Says Begin, “Enough! First there was the loss of the First World War in the History 12 Course and now the addition of Computer Technology and Resources in its place. By eliminating the great war, you eliminate the end of the British empire, emergence of Japan and the United States, the rise of Germany, the Pembina Institute is offering science teachers an interactive guide to environmental advocacy through the website www.EcoAction.ca. The site provides a wide variety of activities from sending an e-postcard to the Prime Minister asking him to protect the climate or an automatic e-mail to all federal and provincial Ministers with one click of the mouse. The site offers background material on environmental issues, updates on campaigns, downloadable campaign materials and a newsgroup for late-breaking environmental stories.

WHY DO WE HAVE TO TAKE THIS STUFF?

It is a question almost every teacher hears at one point. As students hear more about the need for education to “prepare them for the real world”, at least one plaintive voice in every classroom will be heard to ask, “Why do we have to take this stuff?”

Harold Brochmann, a retired mathematics teacher, takes an introspective approach to the question of “Why study mathematics?”, in an article written for the BC Association of Mathematics Teachers. He questions the traditional view that capacities for precision and logic are enhanced through studying mathematics. Brochmann says the notion is based on the Transfer of Learning Theory, which for centuries was used to justify teaching Latin. Says Brochmann, “The same argument can be used to justify the inclusion of chess in the school curriculum. There is no objective data to support the notion and certainly only a small minority of mathematics teachers believe it to have merit.”

He next tackles the notion that nature is governed by mathematical laws and therefore to understand nature, one must understand mathematics. He quotes Galileo who said, “Mathematics is the language with which God wrote the universe.” Brochmann says God may have written the universe in mathematics, “but it has becoming very evident that He didn’t use the equations and formulas studied in school mathematics when He did it.” He adds that mathematicians have known for some time that mathematics does not dictate nature, but only imperfectly attempts to describe it.

Brochmann seems to have more time for the idea that preparation for citizenship should involve a foundation in mathematics to aid students in everything from responsible personal budgeting to understanding the decision-making processes in politics, which are based largely on economics and statistical concepts. However, he acknowledges that, “mathematics that is designed as preparation for citizenship is not taught in the mainstream school mathematics curriculum.”

After identifying a number of good reasons for studying mathematics – cultural heritage, training for thinking, usefulness in everyday life, understanding nature and informed citizenry – Brochmann laments that mathematics seems to exist in the curriculum for the primary reason of being a screening device for admission to higher education. Says Brochmann, “The K-12 curriculum is determined by the mathematics which post-secondary institutions find convenient to require for admission and that’s the bottom line.”

And English?

Gerald Fussell, who teaches in Comox, BC, considers the question of “Why English?” in an article appearing in the Journal of the BC Teachers of English Language Arts. Says Fussell, “Language is vital to culture. If we strip our language use to the bare basics of technical communication, we are paralysing and retarding our culture and development.” He adds that the English program encourages self-exploration, as well as the exploration of ideas, concepts of relationships and of other people through the variety and richness of language. By giving the students an opportunity to exercise their voices in the safe, guided environment of the classroom, he believes the English program provides lifelong skills vital to the development of future citizens.

And French?

John Ralston-Saul, husband of Canada’s Governor General, offers his views on the French immersion programs. The excerpts appear in the Newsletter of the Teachers of Modern Languages. Saul believes French immersion schooling is a continuation of the core theme of Canadian public schooling from its beginnings over a century and a half ago. He tells how illiterate or barely literate parents, most of them farmers, fishermen or loggers, lent their support to education reform. He says their motivation was wanting their children to know more than their parents did. He sees this same pattern being repeated with Canada’s new immigrants and that French schooling is part of the same process. Says Saul, “What could be a more natural betterment than to be able to work in both of Canada’s official languages? These are the tools of knowledge which open the full possibilities of the nation to the student.”

PAPER CUTS

The BC Teacher’s Federation has received a commitment from the Deputy Minister of Education to explore ways of “reducing the burden of unnecessary paperwork on all who work in education.” In a survey to its members, the Federation asks teachers to identify the paperwork they are required to process or complete in discharging duties as a teacher or a member of a school’s staff and requests their recommendations on which types of paperwork could be eliminated without impacting on teaching and learning.
LEARNING RESOURCES

This section contains a selection of resource materials and classroom support activities of interest to teachers in British Columbia. Companies, government agencies and other associations welcome to submit items for inclusion in this section.

Evergreen
Vancouver, BC
Phone: (604) 689-0766
Fax: (604) 689-0622
http://www.evergreen.ca

▲ STEWARDS & STORYTELLERS. 31 p. This resource features stories of six schools that turned their once barren schoolyards into natural landscapes. Parents, teachers, principals and students share the joys and challenges they faced, along with the learning that has grown out of their endeavours. Other schools can use the experiences found in Stewards & Storytellers to guide them on their own projects. Cost: $10.00 plus GST.

▲ BC RESOURCE GUIDE 2000. 56 p. A getting-started guide to creating outdoor classrooms and maintaining natural areas. Includes information on planning, researching and designing your site, as well as fundraising, curriculum integration and maintenance. Cost: $7.50 plus shipping and handling.

BCTF Lesson Aids Service
Fax: (604) 669-6222
Phone: (604) 689-0766

This section contains a selection of resource materials and classroom support activities of interest to teachers in British Columbia.

approach of this ESL
Sandra Gooding and Linda Lee
contains a variety of activities
across the curriculum. Each unit
thinking skills and transfer them
communicate content, language and
lesson aid is to
integration and maintenance. Cost:
$7.50 plus shipping.

LITERATE CURRICULUM. Award-winning underwater photographer Robert Yin teams up with Dr. Stanley Swartz to create these eight books. Designed to support the development of early non-fiction reading, each book provides content with colourful rare photographs. Titles include: Sharks & Ray, Sea Turtles, Octopuses, Squid & Cuttlefish, etc. Grades 1-3. Cost: $9.95 (single book), $37.95 (4 titles).

E-mail: fins@alternatives.com
Phone: (604) 873-5243

• UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
• CYBERGUIDE RATINGS FOR CONTENT EVALUATION
• UNICEF GLOBAL VILLAGE GAME

A getting-started guide to creating outdoor classrooms and maintaining natural areas. Includes information on planning, researching and designing your site, as well as fundraising, curriculum integration and maintenance. Cost: $7.50 plus shipping and handling.

A ONE-STOP TEACHERS’ SHOPPING LIST

A ONE-STOP TEACHERS’ SHOPPING LIST

www.foredbc.org

1. Which gives off more heat energy as firewood; hardwoods or softwoods?
2. What percentage of Canada’s households in 1990 used firewood as a primary source of heat?
(a) under five percent (b) eight percent (c) over 15 percent

HOME PAGES

▲ UNICEF GLOBAL VILLAGE GAME
http://www.unicef-kids.org
In this new educational game on the web, players take the role of a UNICEF community development worker. In a simulated community, meet different individuals and learn about local perspectives on development challenges. The players decide what issue will be acted on and use a budget and volunteers to take a course of action. Free for individual or team play, at home or school.

▲ CYBERGUIDE RATINGS FOR CONTENT EVALUATION
http://www.cyberguide.com/guide.htm
This guide provides evaluation criteria for rating the curriculum content on a website.

▲ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
http://bioguide.epa.gov/agents/bioguide_notes.htm
Kid’s Career provides information on various environmental and animal themes: Echo the Bat, Hummingbirds, Wildflowers, etc. A redesigned species colouring book is available for print out.

▲ TOUR OF BIOMES
http://www.colf.edu/day/module/evise/earthpdy/biomes.html
A distinct ecological community of plants and animals living together in a particular climate is called a “biome.” This site provides photographs and information on the following biomes: tropical rain forest, tropical savannahs and grasslands, desert, taiga, and polar tundras.

▲ GIVE WATER A HAND
http://www.unww.cwa/rec
With Give Water a hand, young people team up with educators, natural resource experts and committed community members to study water issues and take action.

▲ BRAINPOP
http://www.brainpop.com
This student-oriented site offers animated movies explaining matters of health, science and technology. There’s also a section for teachers with related activities.
Quality Control for the Classroom
The Ministry of Education has published a revised guide for evaluating, selecting and managing learning resources for BC classrooms. Once learning resources have been subjected to approximately 50 evaluation criteria, they can retain their recommended status for a minimum of five years unless there is a successful challenge to their suitability.

Under the category of general considerations, the guide suggests that in terms of content, materials should use relationships other than those of mainstream European societies. In terms of methodological materials, materials should be activity-based rather than lecture-based and social considerations such as gender and sexual orientation, sensitivity to diverse family backgrounds and the promotion of the student’s self-esteem are deemed important.

Moving to more specific evaluation criteria, the guide cautions that dated content reduces the educational value. A strong emphasis is placed on active learning, self-expression and interaction in instructional design.

The screening process for social consideration provides a framework for controversial views and opinions. It suggests that alternative points of view are presented as appropriate, that they are suitable for the maturity level of the audience and that they reflect a range of community standards. For the portrayal of sexual orientation, it suggests, “resources should reflect positive awareness and sensitivity in portrayal of diverse sexual orientations including heterosexual, homosexual, bisexual as well as transgender individuals.” In screening for political issues bias, curriculum evaluators are cautioned that one or more political points of view not be stated or advocated at the expense of others. The guide identifies sensitive areas which include labour relations, environmental issues, forest practices and elections.

Under ethical and legal issues, the guide suggests that issues subject to debate on moral or legal grounds be examined closely for accuracy and currency. Examples of ethical and legal issues include pornography, nuclear weapons, land use issues and the ethical use of technology.

Policy Across the Line
With classroom sizes and teacher’s compensation commanding continuing priority at the policy level in BC, it is instructive to see how these issues fared in the November election in neighbouring Washington State. The state allows initiatives to be placed on the ballot to provide voters a chance to shape the political agenda, as well as the percentage make-up of the legislature. In the November election, Initiative 728 was passed and set the goal of no more than 18 children in K-4 classrooms over the next four years. The initiative will cost the taxpayers who approved it approximately $3 billion Canadian. Voters also approved Initiative 732, which guarantees regular cost of living increases to teacher’s salaries. The initiative was spearheaded by the Washington Education Association. Defeated was a proposal pushed by Paul Allen, co-founder of Microsoft, who provided $3 million US for a campaign for charter schools.

The initiative, if successful, would have allowed taxpayers to use public funds to operate private schools. In the debate leading up to the election, opponents of Allen’s proposal questioned his $60 million US stake in a company that runs 47 charter schools in the United States.

Technology Across the Curriculum
The Ministry of Education is working with school districts to develop teaching resources and materials that will help Grades 6 to 9 teachers incorporate the use of Information and Communication Technologies (ICT) into classroom instruction. The ICT Integration Initiative will focus on language arts, social studies, science and mathematics.

Political Leaders Signal Education Priorities
Liberal leader Gordon Campbell and Premier Ujjal Dosanjh both identified education as their top priority in an article appearing in The Journal of the BC Principals and Vice- Principals Association. The leaders revealed remarkably different approaches to how they would approach that goal.

Campbell calls for a triple-A education system based on autonomy, accountability and the celebration of achievement. He notes that the standing education committee of the provincial legislature has not met on critical business since 1972 or once in that time invited teachers, administrators, trustees, parents or students to meet with their elected members. Campbell promises that under a Liberal government, the House Education Committee will meet with education constituents regularly.

He plans to declare K-12 education an essential service, explaining that this will not take away teachers rights to strike, but that “in the event of a strike, as with health care, provincial service levels will be maintained and our children won’t miss precious classroom time”. Campbell promises multi-year stable funding for school boards and the autonomy for school boards to implement the high standards of education his government would establish. On the issue of accountability, Campbell says, “we will demand performance…of trustees, of teachers, of students – everyone will be part of the accountability framework.”

Premier Dosanjh contends that his government’s increasing investment in education over nine years has reduced class sizes and allowed students more teacher time. He says his government’s goal is “making BC Canada’s leader in education”. He describes the two main priorities of the Ministry of Education as:

- To provide for student success by establishing a strong foundation in the Kindergarten through Grade 3 years;
- To improve student learning and equity throughout the school system.

Dosanjh says that British Columbia has demonstrated its leadership by producing Canada’s first performance standards for reading, writing and numeracy. “Measuring students performance is also key”, he adds.
Dr. Benjamin Levin, Deputy Minister of Education and Training for the Province of Manitoba advocates a more creative role for schools in preparing students for democratic participation. According to Levin, learning about political participation is hollow because “schools remain largely places where they (students) have neither political rights nor a political role”. Other than student organizations, which he sees as being primarily focused on social functions, in most cases “the vitality, idealism and optimism of youth are not given an opportunity to participate in a meaningful way in school governance”.

Recognizing that schools are not political institutions he believes that there may be some forms of schooling that more fully embody the principles of democracy. Levin says that education itself is democratic to the extent that both teachers and pupils are subject to the rules of whatever discipline is being explored. He defines teaching as, “giving knowledge away such that the

The Media Awareness Network, a national media education organization conducted a survey of 1,080 randomly selected Canadian families, who owned a home computer and had children between the ages of six and 16. The survey, conducted by Environics Research Group, sought parents’ opinions on their children’s Internet use, the benefits and associated risks with the use of the Internet and effective measures for addressing Internet safety issues. Overall, parents appear to be much more optimistic on the educational benefits of the Internet, compared to professional education researchers or even some dot.com billionaires (see stories on pages 2 and 9). In total, 94 per cent of parents responding identified educational benefits for children as a primary benefit, with their main concern being the appropriateness of content.

Under specific responses, 73 per cent of parents reported having Internet access at home and of those with access, 86 per cent said their children use the Internet. According to parents, their children use the Internet for a wide range of activities, with 65 per cent reporting use for schoolwork.

Only 17 per cent of parents use blocking software, but 75 per cent believe that this tool would be useful on school computers.

While 55 per cent of parents responding think they have primary responsibility for the content their children encounter online, 44 per cent think that others outside the home should take this responsibility. Although 35 per cent of parents say they know “a great deal” about the websites their kids visit, another 36 per cent report they know “a fair bit”. Parental supervision is provided “a great deal of the time” by 53 per cent of parents whose children use the Internet, compared to 41 per cent for television viewing. Parents appear to have confidence in their children’s discretion with 61 per cent indicating that their children would know what to do if they found themselves in an uncomfortable situation online. In terms of parent awareness, the findings were that 21 per cent of children have come across sexually explicit material that their parents are aware of and six per cent have been sent unsolicited sexual material.

Parents believe that managing Internet content for children should be a shared responsibility, with 36 per cent thinking that Internet service providers have the responsibility, while 34 per cent thinks that the users themselves should be responsible for the content. Only 17 per cent of parents use blocking software, but 75 per cent believe that this tool would be useful on school computers.

COMING EVENTS - EDUCATION

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<tr>
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<tr>
<td>Annual Conference of the British Columbia Business Educators</td>
<td>April 5 - 6, 2001</td>
<td>Kamloops, BC</td>
</tr>
<tr>
<td>Contact: Connie Macdonald</td>
<td>5369 Morris Place, Kamloops, V2C 5S3</td>
<td>E-mail: <a href="mailto:cmacdon2@cfn.etc.bc.ca">cmacdon2@cfn.etc.bc.ca</a></td>
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<tr>
<td>The theme of the conference will be technology in the classroom.</td>
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<tr>
<td>World Education Market</td>
<td>May 21 - 24, 2001</td>
<td>Vancouver, BC</td>
</tr>
<tr>
<td>Contact: Lucille Parry</td>
<td>Tel: 604-737-1843</td>
<td>E-mail: <a href="mailto:Lucille@winsinc.ca">Lucille@winsinc.ca</a></td>
</tr>
<tr>
<td><a href="http://www.wemex.com">www.wemex.com</a></td>
<td>The world’s only professional event dedicated to the international business of education, training and lifelong learning.</td>
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SCHOOL ACCREDITATION “DON’TS”

As the debate over accreditation continues in the current school year the BC Teachers’ Federation has advised teachers on what they are required and not required to do as part of participation in the Foundation Skills Assessment.

Among the required activities, teachers are advised by the Federation to include the following required statement when comparing school performance with district or province performance: “The difference between average performance of students in this school and the average performance of students in this district is (is/is not) statistically significant.”

Among the list of things teachers are not required to do as part of compliance with the FSA program are the following:

- Spend any other time including the other five non-instructional days on accreditation activity.
- Volunteer for committees or positions on accreditation committees or sub-committees.
- Collect or compile data beyond what they do as part of their regular classroom activities for report purposes.

- Report whether students are below expectations, meet expectations or exceed expectations.
- Have students complete surveys, read questions allowed to students, distribute parent surveys to students or ensure that surveys are completed.
- Develop plans for improving exam scores in ways that may result in lower participation rates or success rates.

Teachers are advised to keep a log of all time spent on any accreditation activities.
Interview with Cheryl Ziola, President

**FORED BC** provides classroom resources and teacher training in environmental education. President, Cheryl Ziola, talks about the role of the organization and opportunities for participation.

**Landscapes**: What exactly is environmental education?

**Ziola**: It involves teaching students to understand the environmental implications of choices they make and will make as consumers, voters, investors and in their individual lifestyles and giving them the tools to make those decisions responsibly.

**Landscapes**: So it’s not just about trees, fish and mines.

**Ziola**: Hardly. Virtually every industry has an environmental impact. Right now in California, the high-tech industry has a huge public initiative underway to counter charges that it’s over consuming energy and putting toxic waste into the water table. Our approach in BC has been, if anything narrow because of the high profile of two or three sectors. Every business should take the opportunity to dialogue with students on issues that concern them.

**Landscapes**: Does this mean business should be getting into the classrooms?

**Ziola**: It’s a nice thought, but there are logistics problems. There are 300,000 students in the GVRD alone taking over 400 courses in the K to 12 curriculum. Reaching all of them would take an army of volunteers. The best way is to provide teachers with resources, which they can screen and apply. It’s like shareholder relations. It would be nice if a company could make home visits and have tea with each of its millions of investors. But they use professionals to help them reach their stakeholders.

**Landscapes**: And that’s what FORED BC does?

**Ziola**: In part. We don’t represent the interests of an individual company with teachers. That wouldn’t fly and single company materials would have very limited application in today’s complex curriculum. What we prefer to do is package a diversity of materials that meet the needs of a teacher at a specific point in his/her curriculum program. We also bring teachers to workshops to work with the experts of their choice.

**Landscapes**: What do teachers want to know?

**Ziola**: We’re talking about 35,000 individuals here so I’m cautious about generalizing. I can say that there’s a strong interest in job opportunities and teachers are delighted when they learn that the environmental sector in BC is one of the top three growth areas in the province for new jobs. Kids care and they like to know where they can make a difference.

**Landscapes**: With the size of the education budget, why do teachers need resources donated?

**Ziola**: The $4 billion school budget looks huge until you factor in a couple of considerations. First, over 90 percent of the education budget goes to salaries and administration. Then you have operating costs. When you do the math, it means each BC student is allocated about $30 a year for new classroom materials to prepare him or her for a new economy and changing society. There is a clear need for community support.

**Landscapes**: How do we ensure that curriculum doesn’t become commercialized?

**Ziola**: There are a lot of gatekeepers from the Ministry of Education right down to the individual teacher. They do a good job. Still, it’s unrealistic to think that commercial messages won’t enter the classroom. Computers are increasingly a part of learning. If you spend five minutes on most web sites, you are bombarded with commercial messages. That’s why they’re free. We can’t turn back the clock on technology so perhaps we should concentrate on teaching students to be more discerning about messages they are exposed to through the Internet.
THE FORGOTTEN AUDIENCE

Half of the world’s population is under 20 years of age. In BC, the number of people under 18 is greater than the number of voters who elected the current provincial government. The youth audience is powerful and important. Yet, many businesses lack a coherent communication strategy for getting their message to young people and more importantly, hearing their response. Governments fare not much better, notwithstanding their obligation to operate an education system. In hard, political terms, next to the poor, the least influential constituency is the next generation.

If a business has a communication plan that does not include a youth outreach strategy, it has half a plan. Following are some reasons why youth should be a focus of communication planning and what can be done to bring this about.

**Youth Are Politically Active**

All political parties have substantial youth wings with full voting rights to select leaders and create policy. Get to know them. Follow their careers. Many go on to policy roles in a new administration after years of volunteering on campaigns.

**Youth Drive the Environmental Movement**

The canvassers who come to your door for everything from endangered species to genetic foods are usually in school. Talk to them. They’re shaping your company’s future.

**Youth Are Modern Communicators**

This is the first Internet generation. They know how to use this tool to reach politicians, consumers and the media. Your PR Department can’t reach them with press releases. Follow the youth-driven web sites and invite their views on sensitive issues.

**Youth Influence Consumer Choice**

It is estimated that young people determine 20 per cent of household purchases with the number being much higher for electronics and computers. They are influenced by company values, as demonstrated by boycotts of products derived from child labour. Tell them what you stand for, not just what you sell.

**Youth Are the New Establishment**

The new economy is producing great wealth among some very young players. They are beginning to turn that wealth to reshaping the social agenda. The old establishment will need to share the table of influence.

**AND NOW THE WEATHER**

The BC Science Teachers’ Association offers the following comments on weather gleaned from ten and eleven year olds.

- Clouds are highflying fogs.
- The wind is like the air, only pushier.
- Clouds just keep circling the earth around and around and around. There is not much else to do.
- A blizzard is when it snows side-ways.
- A monsoon is a French gentleman.
- Thunder is a rich source of loudness.
- Isotherms and isobars are even more important than their names sound.
Predicting that as many as 700,000 trade and technology jobs will open up in the next few years, the Premier says his government is working with school districts to expand options available for students to access those careers. The goal for apprenticeship programs is to double enrolment to 1,000 students over the next year.

He notes that aboriginal students are achieving graduation rates of 38 per cent up from 34 per cent two years ago, but well below the average of 78 per cent for non-aboriginal students.

**Special Education Report**

The Ministry of Education has released a report containing 47 recommendations on special education in British Columbia. Over 450 submissions were received from individuals and interest groups, and the major stakeholder groups consulted included The Teachers’ Federation, The School Trustees’ Association, The Confederation of Parent Advisory Councils and the Canadian Union of Public Employees.

Among the recommendations are that school boards must ensure that each student’s educational program is based on their needs and not on funding allocations. It is also recommended that school boards assess the needs of students with special gifts and talents and provide them with appropriate early intervention and sustained support. It also calls for the Ministry to direct that clear evidence of the effectiveness of programs and outcomes for students who have special education needs be included in school board annual reports and that by the end of this year the Ministry investigate whether the students with special needs are having access to technology to assist their learning.

**Science Curriculum Review**

The Curriculum Branch of the Ministry of Education is conducting a review of the K-12 science curriculum. As part of the process, the branch has channelled a survey to every teacher in British Columbia who currently teaches science and the answers will be incorporated into the curriculum review process for the revision activities slated to begin in Spring 2001. The survey invites teachers to comment on the usefulness of instructional resource packages, the appropriateness and precision of the prescribed learning outcomes and the factors that determine the content of science teaching approaches by individual teachers. Some of the suggestions are student knowledge, the teacher’s interests, student’s interests and current events.

**Tuition Rebates for Teachers**

The Ministry of Education is offering rebates of up to $240 per course to teachers who successfully complete approved mathematics and social studies courses at the Province’s post-secondary institutions. The program is limited to two rebates per teacher per year to a maximum of 1000 rebates per fiscal year.

**Rebates for Teachers**

The Provincial Learning Network or PLNet established by the Ministry of Education is an initiative to connect all schools and community colleges to one another and the Internet. The goal is to allow equity of access to educational opportunities and information resources on the Internet. The first educational site was connected to PLNet in May 1998 and today there are 2,204 sites connected including 1,871 K-12 sites and 125 post-secondary sites.

**Skills Assessment**

The Foundation Skills Assessment survey or FSA evaluated about 150,000 students in Grades 4, 7 and 10 in May of last year. The Ministry reports that because in the year 2000 FSA was significantly different from previous assessments “it is not possible to make accurate year to year comparisons, but it will become a benchmark for future trends.” Among the highlights, at the Grade 4 level 21 per cent of students were not yet within their expectations for reading as defined for their grade and in numeracy 20 per cent were not yet within expectations. At the Grade 7 level, 19 per cent were not yet within expectations for reading, 20 per cent were between expectations in writing as were 20 per cent in numeracy. By the Grade 10 level, in reading comprehension, 21 per cent were not yet within expectations, for writing 32 per cent were below the expected level and 25 per cent fell below expectations in numeracy.

**Alternative Approaches in Aboriginal Education**

An advisory from the Student Assessment and Program Evaluation Branch informs teachers of opportunities to improve the graduation rates for First Nation students. It suggests that students may begin to earn credit for a Grade 11 or 12 course, while they are in Grade 9 or 10 and provides the example that a talented young carver in Grade 10 could earn credit for Visual Art 3D 11 or 12. Similarly, students may earn credits for knowledge and skills gained outside the school, with the example provided that a pow-wow dancer could receive equivalency credit for Fine Arts 11 or Dance Performance 11 or 12. Students may also earn credits in Aboriginal programs through independent directed studies, such as the example of a student storyteller who may earn additional credits in English 12 through the Independent Directed Studies Program.

**Improving School Achievement**

and school district’s money. Robert Slavin, a researcher at Johns Hopkins University who founded the program Success for All, agrees. “So often teachers are herded into half-day workshops on something they really don’t care about, that they didn’t ask for, that doesn’t really relate to problems that they perceive”. Research by the National Commission shows that the most effective professional development programs are the ones that teachers seek out or develop themselves.

**Education Facts**

It is estimated that it would require $127 billion to fix school buildings in the United States. A survey of 903 elementary and secondary schools found that 50 per cent reported features such as heating, plumbing, roofs, sprinklers and fire alarms to be in less than adequate condition and 43 per cent reported environmental problems.

— National Centre for Education Statistics, December 2000

A national survey of school principals asked whether their school’s capacity to provide science instruction was limited by a shortage of funds. The percentage of school principals reporting shortages ranged from a low of ten per cent in British Columbia and Quebec to a high of 37 per cent in New Brunswick. In neighbouring Alberta, 21 per cent of school principals reported shortages of science teachers.

— Council of Ministers of Education, Canada, June 2000

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**Dancing for credit**

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**Education Policy… continued from page 12**

**COMPREHENSIVE LITERACY**

A comprehensive approach to literacy in schools encompasses learning literacy, learning about literacy and learning through literacy, according to Dr. Marilyn Chapman, writing in the Professional Journal of the BC Primary Teachers’ Association.

Learning through literacy involves using literacy to facilitate thinking and learning in various contexts across the curriculum. Learning about literacy means developing an awareness of the nature and purposes of literacy such as print awareness and symbol/sound relationships. Learning literacy itself means learning to read and write including decoding, vocabulary, fluency, comprehension and spelling. Chapman says there are no quick fixes or magic bullets that will solve literacy problems. “The best literacy program is a thoughtful, knowledgeable teacher”, she says.