

Editorial

From the Editor



I am writing this a few days before Christmas—a day of peace. By the time this issue of *Connections* goes to print, Britain and the United States may have declared war on Iraq.

At times I feel helpless in the face of the wrath of superpowers, as I am sure many of you do. My response is to think globally and act locally, which is the only way I feel I might be able to make a difference. This issue is therefore dedicated to building sustainable community. The spirit to build peace where it seems least likely to reside slips out everywhere, something that the front cover photo attests. It was taken by Rebecca Lippiat-Long on a trip to Europe this fall—in a part of the world most of us would be too afraid to travel into. Her moving account of that experience can be found in this issue.

I would also like to draw your attention to a national initiative called Vibrant Communities, which is currently getting off the ground in 13 cities

across Canada, including Edmonton and Calgary. The focus of this initiative is to find sustainable solutions to the underlying causes of poverty, thereby reducing the number of people living in poverty. Check out www.vibrantcommunities.ca for more information on this exciting project. Get your students involved in the discussions. Participate with class projects.

For a refreshing look at how to bring about change, I strongly recommend taking a look at *From Information to Application: How Communities Learn*, by Sherri Torjman et al., published by the Caledon Institute of Social Policy, September 2001 (ISBN 1-894598-93-8). It is available on the Internet at www.caledoninst.org. Click on Publications Search, then type the name of the book into the keyword search. This book had me so excited that I could hardly read fast enough. It takes a very concise and well-researched look at the barriers to change, primarily in the context of community, and gives positive ideas about how to help overcome those barriers.

Please note that I have exercised editorial power and revised the schedule for upcoming issues of *Connections* in order to bring important and current issues to the forefront. The new schedule is available on page two.

Best wishes always, and peace in the upcoming year,

—Karin Adshead



Photo by Karin Adshead

Upcoming Schedule for Article Submissions in *Connections*

Karin Adshead

If you or anyone you know would be willing to submit an article to *Connections* on any of these subjects or one of your own related to the overall theme for any specific issue, please let me know. You will find contact information and details on format at the end of this article.

If you are unfamiliar with GEOEC, please check out our website at www.geoec.org.

Thank you so much for your time!

Please include the following with your submission:

- Brief biography (2–3 sentences)
- Your mailing address (so we can send you a copy)

Upcoming Schedule

Theme: Water, Water Everywhere: What Are We Going to Drink?

Deadline for submissions: March 15/03, Issue due out: May 15/03

- Changing laws
- Loss of wetlands
- Impact of development
- Watersheds of Western Canada
- Pollution issues
- Boundary issues: Where do they stop?
- Global water crisis: How does it affect Canadians?
- Classroom experiments
- Story of a river: Changes over time

Theme: Climate Change

Deadline for submissions: June 15/03, Issue due out: August 15/03

- The big picture
- Perspectives on climate change: big debate (I need two perspectives on this)
- Understanding Kyoto: an analysis of the document
- Solar power
- Wind energy
- Composting

- The natural step
- Greening a school
- Student's questions: A classroom talks about climate change
- Classroom experiments

Theme: A Sense of Wonder

Deadline for submissions: September 15/03, Issue due out: November 15/03

- Rachel Carson: Woman, scientist, history maker
- How do you get children to open to their sense of wonder?
- How do you get teenagers to hold on to their sense of wonder?
- A personal journey of discovery: identify the moment that you reclaimed a lost sense of wonder
- Poetry submissions on the beauty of nature all around us
- Photography and artwork that celebrates nature's wonders
- All things bright and beautiful, all creatures great and small
- Personal accounts of experiencing the wonder of life and living in tune with nature
- A moment of wonder that propelled you into a life career in environmental or outdoor education
- An account of the person in your life who inspired you to see the wonder of nature
- Building a sense of place

In addition, each issue includes the following features:

- What's Happening (and Where)—you tell me
- Resource Feature—a personal account of an outing or resource-related experience, written like a book review
- Who You Gonna Call—identifying people who offer valuable and possibly unusual resources for teachers
- Reach for the Stars—celebrating models of excellence by profiling case studies

What Submissions Should Look Like

Preferably, submissions should be a maximum of four typed pages in length but are not limited to that. The readership consists of teachers, educators and interpreters who are directly involved in environmental, global and outdoor education in some capacity, and people of all ages. Teachers really appreciate examples of working ideas that they can take into the classroom (indoors or out). The style of *Connections* is relaxed, informal journal style. However, quality writing is still important and valued. We will send you a free copy of the issue that features your article.

Artwork and Photos

There is also a great need for artists and photographers to submit artwork and photos to be featured in the newsletter. If you think that you have a photo, drawing, sculpture or anything else that would compliment any of the themes listed above, please let me know.

Connections Photo Contest

The three categories are:

- Our natural world
- People in nature
- Children at play in nature

All photos should be sent to the editor as soon as possible. The winners will be announced at the GEOEC conference in May 2003. The prize is yet to be determined. All submissions will be featured in *Connections* in upcoming issues.

Sending Submissions

Sending submissions by e-mail is ideal because they arrive in a very functional format. Sending them on a disc by mail would be second best. If you are still working on a typewriter or writing by hand, or if you are sending artwork, the mail still gets through.

E-mail: karin.adshead@earthchallenge.com

Regular post: Karin Adshead, editor, GEOEC *Connections*, 9829 74 Avenue, Edmonton, Alberta, T6E 1G1

Articles and Features

Truly Intentional Co-operative Living

Jackie Avent

I arrived home today to find that the walk wasn't shovelled, there was a large pile of shoes in the entrance way and I could hardly open the door, there was a pile of dirty dishes in the sink (and today was my cooking day) and there were three people I didn't know hanging out in the living room. The strangest thing about this situation was that it was normal and one of the things I love most about where I live.

Within 10 minutes of being home, three housemates came home as well. One of them shovelled the walk, one cleaned up the mess of shoes and the other swept the kitchen. The three guests in the living room found out that I was cooking and helped out in the kitchen. Within an hour of being home, there were no dishes left to wash (I hadn't done any of them), there was a huge pot of soup on the stove, a housemate came home with wine and fresh bread, and the table was set. I had cut some carrots for the soup and got the dishes out to set the table. This is a typical occurrence when you live at the Golden Lentils Lodge.

Golden Lentils is part of the Assiniboia Community Housing Co-operative (ACHC), a member-run co-op in Edmonton, Alberta. ACHC is owned and operated by the residents of the co-op, facilitated by a volunteer board and run on a nonhierarchical basis. Everyone takes turns sitting on the board, being the house representative and managing the house and co-op financial information. It is a lot of work; we put a lot of time and energy into keeping the not-for-profit business operating. It is also incredibly rewarding.

There are five permanent residents at the Golden Lentils Lodge. Three have been here for between one and three years, and two have for been here between one and five months. There is space for seven residents and one guest in the house. It is rare to have all the space filled, but it is quite common to have six people around a lot of the time.

The housemates all work different hours and have different schedules.

It is safe to say that we are never all together unless it is planned.

Someone is always missing. It makes for interesting house meeting times, and you never know who to expect for dinner.

The house shares everything. We share grocery shopping and the weekly cooking, cleaning and household maintenance. One person goes on shopping duty for the given week, during which they do not have to cook. The people who are not on shopping duty cook one evening a week and do the dishes for that day (and any dishes that have accumulated since the last person cooked).

Someone will sometimes take pity on the evening chef and do a round of dishes in the afternoon, but that is not required or expected. The food we eat is vegetarian (the rumor is that there has not been meat in this house since it was sold to ACHC over 30 years ago), often vegan, mostly organic and locally grown or made, and always delicious. We eat extremely well. Everyone contributes \$35 a week to our food fund, which

the shopper uses to purchase that week's supplies. Five of these dollars goes into a fund for bulk purchases, such as all-purpose cleaner and cases of toilet paper from the Earth's General Store, organic grains from GrainWorks and other random expenses. Thirty of these dollars is spent at locally owned and operated markets and grocery stores. Our main shopping principle is local before global.

Each person in the house has a designated chore area, which they are expected to clean approximately once a week or as required. There is an ongoing maintenance list on the bulletin board that is a guideline for what needs to be done around the house and yard. Maintenance

expenses are all reimbursed (except for the labour cost—that's volunteer!).

There are rarely any major conflicts in the house. This does not mean we do not have disagreements and tension between housemates or that we don't need our own quiet time to relax and unwind from our lives at work and home—but we respect our housemates' needs for privacy and down time. We know that everyone has varying degrees of stress and tension in their everyday lives, and we know that what goes around comes around. That is why everyone extends themselves at certain times. We accommodate and make concessions for each other because we know that one day the favor will be returned.

The Golden Lentils Lodge is a truly intentional and sustainable community. We choose to live here, and by doing so we choose not only our lifestyle but our family. We are sustainable not only in where and how we choose to spend our collective dollars but how we choose to build our community as well—on a principle of mutual respect, understanding and openness that is unprecedented in many families, let alone a group of people from different backgrounds and lifestyles who choose to live together.

Jackie Avent is an environmental educator in Edmonton, Alberta, who walks her talk.

Courage is not the absence of fear,
but rather the judgment that
something else is more important than fear.

—Ambrose Redmoon

Communities Reclaiming Their Food System: The Role of Organic Agriculture

Doug Bone

We are experiencing the beginning of a groundswell of concern for the health of the environment and all the inhabitants of our little blue planet—our mother Earth. You can feel it. Change is in the air. I believe we are on the cusp of a massive shift in the way we in western countries view the world and live in it. We had better make it happen fast or else the backlash from nature and our Third World sisters and brothers will be furious.

This article is about communities reclaiming their food system, but if we are to have any hope of doing that, we must first understand that the difficulties we face in securing our food system are symptoms of a larger problem that is rooted in a faulty decision-making process. Unless we take steps to address this fundamental flaw, our problem-solving efforts will be doomed to addressing only symptoms and not root causes. We don't need to look back any further than the last green revolution to see how conventional decision making has only compounded our problems. We have not been working. We have found ourselves stuck in a hole and have responded by digging even harder, using technology to try to solve nontechnological problems.

I am an organic farmer from Saskatchewan, and I want to tell you about the role that organic farmers play in securing a safe food supply, but I'm also an aspiring holistic manager and some of my views come from that perspective as well.

Allen Savory, a founder of the holistic management movement, says that environmental degradation and loss of biodiversity are caused by a flawed human decision-making process. The result is poverty, food insecurity, social breakdown and violence. According to Savory, good decisions are only possible when all the stakeholders being affected base their decision on a collectively formed goal. The common goal must be environmentally, socially and economically sound in order for it to be sustainable. Economic profit is only one of the three components that have to be kept in balance. Sustainability is like a three-legged stool: it stands on these three pillars of good decision making. This is true for individuals, small groups or entire nations.

We are experiencing a crisis in the way we govern ourselves. Democracy doesn't seem to be working. We have governance that ignores the three pillars of good decision making—

social, environmental and economic soundness—and only allows the stakeholders—citizens—to participate on the fringes in a very superficial way.

We have become vulnerable as a result. Violent corporate assault is being waged against the world's ecology and against humanity, and the invasion is as real as that of any jackbooted army. This stampede for profit at any cost continues to erode democracy. Governments and international trade organizations, which once acted as instruments of the will of the people, have become agents and promoters of amoral transnational corporations. The role of the university has been similarly compromised.

The genetic commons is one of the world's heritage territories that is now being fought over and carved up. To the detriment of farmers and the public, patent laws that are carried in international trade agreements are being used as weapons by the transnationals to stake out claims in a genetic Wild West. Bio-patenting means that corporations, not people, will permanently control not only the seeds farmers use but the very genetic foundation from which our

food and, indeed, the existence of all life comes.

Although organic farming is not the only answer, it does concern itself with the issues of the health of the community, food and the environment. Until now, organic farmers have been able to contribute to environmental health and sustainable farming by avoiding some of the pitfalls of globalization. We did this by stepping away, to some extent, from the high input treadmill of industrial agriculture. However, that option will end when traditional seed stocks are contaminated by genetically engineered (GE) varieties released by irresponsible and predatory chemical companies.

Customers of organic food demand a zero tolerance for GE contamination. However, it seems that a self-serving biotechnology industry is deliberately using genetic pollution to ensure that organic farmers lose the ability to serve those markets. This may spell the end of certified organic agriculture. Even if you don't eat organic food, GE contamination will result in the loss of your right to choose whether or not you want to eat GE food. GE contamination will also result in all farmers and communities being permanently locked into a corporate-controlled, industrial-style food system. The alternatives will have been destroyed, even for conventional agriculture. If the transnationals pull this off, it will surely go down as one of history's greatest corporate coups—or scams, depending on how you look at it.

Saskatchewan organic farmers responded by launching a class action lawsuit against Monsanto and Aventis in January 2002, seeking

compensation for the damage already done to organic farmers by the introduction of GE canola into the environment and calling for an injunction to prevent the introduction of GE wheat. We are doing this not only on our behalf but on behalf of the public as well. We believe that this is the opening legal skirmish in a battle for the future of life as we know it on this planet.

The loss of canola as a cropping option because of GE contamination was a large blow to Saskatchewan organic producers. Wheat is the cornerstone of western Canadian agriculture and losing it in the same manner could devastate prairie organic farming.

The Saskatchewan Organic Directorate (SOD) is an umbrella organic organization. The SOD subcommittee, the Organic Agriculture Protection Fund (OAPF) committee, was set up to coordinate and raise funds for this class action. It has a mandate to lobby government and is seeking to build a broad alliance of individuals and organizations that share common goals.

The OAPF committee is very aware that this high-profile and precedent-setting legal action has the potential to raise international public awareness on issues that go beyond the narrow focus of the class action—issues that are common and crucial to the well-being of all farmers, the public and the environment world wide. I believe that Saskatchewan organic farmers are part of an international movement—a community that is rising up against the corporate agenda and the governments that promote it. We will take charge of our future. Globalization will happen on our terms.

I'll conclude with a couple of thoughts on personal responsibility and power. I've been placing the blame on transnational corporations, but to some extent that is a cop out. It has been said that corporations exist only at the whim of the public. Corporations are only an idea that exist in our minds, and if we cease to believe in that idea, it loses its power over us. Then it withers and dies, just as the Soviet Union did when its citizens ceased to believe in it.

There is a dark force at work in our world and it walks with each one of us. It's insidious and seductive, and it feeds on human fear and greed. It entices us to do things we would not normally do and passively accept someone else's agenda, all in the name of security.

Whatever you choose to call it, it tells us to use poison to grow our food. It tells us to turn a Brazilian rain forest into a pile of wood chips and a vast cattle pasture. It tells us to turn our farms into concentration camps for animals. And it tells us to close off our borders to the weak and hungry. As the cartoon character Pogo said, "I have seen the enemy, and it is us."

If Pogo is right, however, the beauty and the hope is that each one of us holds the key to change. At the G6B Peoples' Summit in Calgary this summer, David Korten said, "We are the ones we have been waiting for." Let's hold that thought as we work toward making the changes in our federal and provincial political systems that will bring about better decision making. The security of our food supply and, indeed, the very future of our planet depends on it. Some system of proportional representation is long overdue in this

. . . *Articles and Features* . . .

country, not to mention the country south of us.

Perhaps change begins best even closer to home. Wendell Berry, commenting on hope and responsibility, says, "The only answer

to any of our problems is a way of life that is not corrupt, not violent, not wasteful nor toxic. That calls for a lot of small, mostly personal and local steps that probably have to be taken . . . one at a time."

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You've got to sing like you don't need the money,
love like you'll never get hurt,
dance like there's nobody watching.
It's got to come from the heart *If you want it to work.*
—Susanna Clark and Richard Leigh

Helping Students Work Toward Sustainable Communities

Janina M. Carlstad

Ability, responsibility and sustainability: three words that can challenge and motivate educators to develop exciting, real-life, curricular-based and inspirational learning programs. Most teachers feel that their responsibility is to help students be the best they can be. Their hope and belief is that, in so doing, they can help students develop positive and responsible attitudes to help them cope with an ever-changing world. How can teachers sustain hope in their students? How can teachers develop and sustain responsibility? Further, by sustaining both of these concepts, can teachers do their part in sustaining community?

Indeed, hope and responsibility are powerful words. They are certainly two words that have long served to motivate me to do my part in trying to ease the worries of the world. From the days of our youth, many of us have tried to find ways of making a difference in the world and harmonizing people with people, and people with the environment. This has been my passion since before I was a teenager. At the same time, many of us grow discouraged after a while, especially if we find that we aren't making as big a dent in world issues as we'd hoped. But we can't quit trying, can we? If we all do what we can, when we can, we will make a

difference in our own way. All the little things count and actions speak louder than words. Teachers can help students develop the skills they will need to build sustainable communities by providing students with opportunities to pursue their visions in realistic, responsible ways and then expand into larger projects in their own time. Perhaps in doing so they may be able to sustain their own sense of wonder as well.

Over the past few years, I have had the privilege of working in a small school where we were able to share leadership and work as a team to deliver a rich and varied academic program with a focus on inclusive learning communities and community sustainability. Every effort was made to work closely with the school division and the surrounding child-centred community and its agricultural society in providing an inclusive learning culture for its students. The process included helping students build an awareness of and responsible attitudes toward themselves and the earth in order that they might develop the skills necessary to work together, foster healthy living practices and, through critical thinking, apply their skills in creative ways to sustain a harmonious relationship between people and resources.

Students and staff worked with the Alberta curriculum of studies and a host of helpful stakeholders and resource people, and were involved in a variety of projects and skill development that helped them gain knowledge about themselves, connect with others and relate to their local and global community. The school program's theme was "Thinking Globally and Acting Locally." It focussed on promoting principles of equity, respect for diversity, human rights and responsibilities, as well as collaborative ways and other means of sustaining environmental and human communities. The activities were designed to help students connect with their past, present and future. The following are the activities that we undertook in order to achieve our vision.

Students and staff used e-mail, internet, fax, phones, video and scanners to contact other young people from across Canada and around the world in an attempt to communicate, learn about and understand their successes, interests and issues. The contacts not only provided us with varied points of view and related life experiences but also helped us think about peace, goodwill and global community. We looked at and compared society's different values by examining various

heroes, successful leaders and other role models. Then, in order to find our own ways of making a difference, we became involved in a wide range of programs that helped us understand our own identities and value systems.

Our small student body undertook a host of activities to do its part in helping our planet move toward health and harmony. Students, staff and volunteers

- adopted an extensive recycling program;
- set up a food bank outlet for needy northern Alberta families;
- worked on community and highway clean-ups;
- promoted water conservation education and celebrated International Water Day;
- promoted sustainability of resources;
- celebrated Earth Day;
- worked for the care and management of wildlife;
- appreciated our wild lands through environmental education; and
- made donations and provided moral support to WaterCan and Ryan's Well for building fresh water wells in Africa, CPAR for prevention of desertification in Africa, World Vision for provision of food and economic possibilities to a family in Africa, Foster Parents Plan for our foster child in Mali, Operation Christmas Child, the Youth Millennium Project and several others.

We interviewed local pioneers for social studies and language arts projects and heard, through story and song, how our community was developed. Storytelling continues to be an important learning tool. We explored our Canadian identity,

both regionally and nationally, focussing on ways and means of keeping that identity alive. We created our own songs and poetry about our area. We collected local recipes, created a picture book of our school and area, and wrote several biographies that we posted on our school website. We stored these materials in the local library, hoping that they would help maintain our local pride and community spirit, despite the continuing impact of globalization on the rural community lifestyle.

These students will grow and develop in their own ways and expand into other communities, and they now have the tools to confidently and creatively embrace an ever-changing world. We can see these tools at work as we observe our students interact with each other, work toward solutions and apply their communication and presentation skills. Our hopes for the future lie in students who are products of an inclusive learning community: creative, critical thinkers who contain youthful energy, are prepared for whatever lies ahead and have the confidence to put their skills to work for them.

Communities grow, shrink and evolve. Our own identity began to take firmer root when we realized this. While we focussed on helping people in other areas of the world achieve independence and higher quality of life, we also looked at our community and sensed its beauty, revelled in its freedom and explored its humanity and needs. We examined key elements that help keep communities alive and discussed possible future economic trends and the roles that outlying areas such as

ours may play in the future. As we did this, we realized that we are not alone. Through communication and understanding, we would be able to sustain our community and seek sustainability on a global scale.

Conferences like the International Children's Conference (ICC) are tremendous opportunities for people from around the world to gather and learn from each other, especially on subjects of sustainability. These outside sources further support the knowledge and concepts introduced by parents and schools. A couple of our students, through their efforts in our school, qualified as delegates to attend the ICC on the Environment, held in Victoria, B.C. last May. At ICC 2002, the students were able to connect with the driving forces behind some of the social-action projects that our school was involved with, including Ryan of Ryan's Well. They met youth from around the world and heard a variety of speakers, ranging from David Anderson, the Canadian minister of education, to Raffi, the well known family entertainer and environmental advocate. The students experienced a wide range of activities, philosophies and challenges and returned with a vision of how they wanted to meet the challenges set out at the conference and connect with others around the world to sustain environmental and human communities. One of our delegates, Jenna Roy, gives her impressions of the conference and describes the impact it had on her life:

My name is Jenna Roy. I am a Grade 6 student at Menno Simons School. Last year, I had the honor of attending the International Children's Conference (ICC) on

the Environment, held in Victoria, B.C. I was chosen to represent our school for all the environmentally friendly projects we had done.

There were over 300 kids and chaperones from 80 countries at the conference. We went to different workshops each day for a week and talked about ways we could help the environment. Some of the highlights of the conference for me were the Raffi concert, singing with Holly Arntzon, whale watching, meeting Ryan from Ryan's Well and meeting lots of different people from lots of different places in the world. I learned how other people help the environment.

Meeting Ryan was a real privilege. He has done so much to help Africa's poor people. He helped the people of Africa who had no fresh water by building wells. I went to a workshop with Ryan and his mother. I learned different ways of helping people in other countries. I also learned how one small person can make a great impact on the world.

Now I have started an Eco Club at my school and have started recycling and teaching kids about how to care for our environment. I have applied for the junior board for the 2003 ICC conference. My friend from the conference last

year has applied, too. My friend is from New Zealand. I hope that we will soon get to see each other.

I encourage all students that care about the environment to apply to attend the conference next year. To apply, go to www.unep.org.

Toward the end of the school year, the efforts and involvement of our students in environmental education and related activities resulted in our school being invited to participate in preparing an action plan that would be submitted to the World Summit on Sustainable Development, held in Johannesburg last August. One of the requirements of the document was that we had to describe how we would carry out our activities in future. This was a healthy focus for our little school, and it allowed us to think about which elements of our projects could be continued in other schools. The action plan is now a document that helps us sustain what we've begun; continue to build and sustain interest, activity and inclusive learning; and work toward sustaining community.

Our tiny rural school with its small student body and small staff was able to do these activities and celebrate their successes. The principles and the vision behind the efforts, however,

remain the same in any setting, dependent only on the decision to utilize them or not. Sustainability will continue, even if only a few of the activities mentioned here are carried on in other settings (and there are many we haven't done or even thought of). We found that keeping projects relevant, connecting with others and looking at every opportunity as a learning adventure helped students and staff keep projects focussed and energized, and thus helped students work toward realizing their own responsibility and hope for sustainable communities.

Janina has worked and lived in the Bear Canyon community for 15 years, where she has taught a variety of grade levels and courses from Grades 1-9. Janina's concern for the environment and for the change occurring in her community has made sustainability a primary focus for her and her colleagues. The work of the Bear Canyon School students may be seen in part on the school's website, www.prsd.ab.ca/bc. Janina currently works at Menno Simons School, where she teaches junior high language arts and social studies, CTS courses and Grade 1 social studies.



*Eco Club Organizer Jenna Roy
Photo by Janina Carlstad*

Sustainability: What Does It Mean?

Matthew Hiebert

The term sustainability is often misused and even more frequently misunderstood, like so many of the terms used to describe abstractions in the modern world. Most people have the correct impression that it loosely denotes environmental protection, but this is just one facet of sustainability, and its broader meaning is in danger of eroding from both overuse and misuse.

Part of the problem with defining sustainability is its wide variety of usages, including sustainable agriculture, sustainable development, sustainable resource use, sustainable building and sustainable growth (which is actually a contradiction of terms). Jacobs (1993, as quoted in Roseland 1998, 4) has identified three core elements of sustainable development that are consistent across its various interpretations: "Environmental considerations must be entrenched in economic policy making, sustainable development incorporates an inescapable commitment to social equity, and development does not simply mean growth as defined by faulty measures of economic performance, such as increases in gross national product [GNP]." Sustainability is indeed an environmental movement, but it is also a social and economic movement. It recognizes the intimate connections between environmental integrity, economic stability, social equity, and human well-being.

Sustainability is the ability of a structure to perpetuate from year to year. This means the upkeep of human wellness, as well as social, economic and environmental vitality from one generation to the next. Sustainable policy alternatives have replaced economic bottom-line decision making with triple bottom-line decision making by adding social and environmental accountability into the equation.

In the World Commission on Environment and Development's 1987 report entitled *Our Common Future*, sustainable development is defined as meeting "the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability is, in part, a future and global orientation; it looks to maintain or improve the quality of life of the world's inhabitants. But sustainability is also a present and local orientation; sustainability recognizes that citizens need to be involved in the health of their community at the local level if healthier societies are to evolve overall.

In more practical terms, several methods have been developed to measure or define sustainability. One trend is to assess a variety of indicators to describe an area's trend toward or away from sustainability. Sustainable Calgary, in their *2001 State of Our City Report*, looked at 36 indicators in the areas of

community, economy, education, natural environment, resource use and wellness in order to get a balanced view of the sustainability patterns in Calgary.

Another progressive way of measuring sustainable development has been to create economic tools that represent our situation more accurately than standard tools, such as the GDP or GNP. One of these tools, the Genuine Progress Indicator (GPI), has been developed locally by the Pembina Institute for Appropriate Development. GPIs are designed to lay out a more complete picture of how a nation is doing by attaching cost values to social and environmental ills and subtracting them from standard measures of income and growth. China has chosen a different scale and has committed to developing Comprehensive National Accounts, which subtract depleted natural resource stocks and many human health costs from positive figures of economic growth (World Bank 1997).

These systems of measurement stand in opposition to traditional economic indicators, such as the GDP, which is merely a measure of how much money exchanges hands within an economy. The more money exchanged, the higher the GDP. This means that increased consumer spending is good for the GDP, regardless of what is purchased. It also means that any time a car

crashes, a fire devastates a building or oil spills into the ocean, the tremendous amount of money exchanged to rebuild or clean up also increases the GDP. The sustainability perspective posits that true prosperity and well being are not simply a function of spending power.

Another way of measuring sustainability is through the use of a tool called an ecological footprint calculator. An ecological footprint is the geographical area required to sustain a lifestyle. Factors included in footprint calculations may vary, but they typically include a variety of mutually exclusive land uses, such as the land required for the production of food products, the timberland required for wood and paper consumption, and forested land required for the sequestering of greenhouse gas emissions. An ecological footprint calculator assigns a point value to each response on a survey of lifestyle choices, generalizes them to broader consumption patterns and then approximates the total land area needed to sustain that lifestyle.

Average ecological footprints vary greatly in size from one country to the next. The average size of a Canadian's ecological footprint is 6.9 hectares. India averages 0.8 hectares and Germany 4.7. Sustainability can be gauged by comparing your footprint, or your community's average, to the amount of arable land available per capita, the world average being a mere 1.9 hectares. If your footprint is greater than your share of the total, it means your lifestyle is not sustainable. The average global footprint of 2.3 hectares means that we are living beyond our planet's

capacity (Redefining Progress 2002). This overuse has been possible by cashing in on solar energy that has been saved over millennia in the form of fossil fuels, depleting stocks of natural resources and dumping our cleanup costs back into the environment that sustains us, thus reducing its capacity. This just isn't good accounting.

It can be surprising to trace your footprint back to its source and find that large portions of it come from seemingly insignificant choices. For example, each trip you take in an airplane requires a relatively large amount of forested area to sequester your share of the plane's CO₂ emissions. Meat eaters tend to score much higher than vegetarians because of the expanse of pastureland required for the production of meat.

Proponents of education for sustainability suggest supplementing the old standard of the three Rs with the three Es: equity, environment and economics. In recent years, a good deal of work has been done in the area of sustainability education. Manuals, objectives and sample curricula can be downloaded for free, and more and more teachers are infusing their regular lessons with discussions about a different kind of progress. Though a lot of work remains to be done to bring sustainability into the mainstream, people are taking note of this balanced perspective and are coming to see it as a viable alternative to unbridled economic growth.

Sustainability is catching on. A small testament to this is the proliferation of resources available on the Internet. A short selection of links follows.

For information about sustainability in general, GPIs and ecological footprinting, visit

- Redefining Progress
www.rprogress.org
- Sustainable Calgary
www.sustainablecalgary.ca/home.html
- Towards Sustainability: Resources for Advancing a Sustainable Future
www.towards-sustainability.co.uk
- International Institute for Sustainable Development
<http://iisd1.iisd.ca>
- Best Foot Forward
<http://bestfootforward.com>

For downloadable teacher resources related to sustainability, visit

- Sustainability Education Handbook: Resource Guide for K–12 Teachers
www.urbanoptions.org/SustainEdHandbook
- Education for Sustainable Development Toolkit
www.esdtoolkit.org
- Teaching and Learning for a Sustainable Future
www.unesco.org/education/tlsf
- Education for Sustainability: An Agenda for Action
www.gcric.org/edu/pcsd/toc.html
- Canadian Parks and Wilderness Education Program: Inventing the Future
www.cpawscalgary.org/education/topics/inventing-future.html
- Education for a Sustainable Future: A Resource for Teachers, Curriculum Developers, and Administrators
www.edu.gov.mb.ca/ks4/docs/support/future/sustaineducation.pdf

Bibliography

Manitoba Education and Training.

Education for a Sustainable Future. 2000. Available online at www.edu.gov.mb.ca/ks4/docs/support/future/sustaineducation.pdf [accessed September 21, 2002].

National Forum on Partnerships Supporting Education about the Environment. *Education for Sustainability: An Agenda for*

Action. 1994. Available online at www.gcario.org/edu/pcsd/toc.html [accessed June 10, 2002].

Redefining Progress. *Ecological Footprint Accounts: Moving Sustainability from Concept to Measurable Goal*. 2002. Available online at www.rprogress.org/programs/sustainability/ef/efbrochure.pdf [accessed December 5, 2002].

Roseland, M. *Toward Sustainable Communities*. Gabriola Island, B.C.: New Society Publishers, 1998.

Sustainable Calgary. *2001 State of Our City Report*. Calgary: Sustainable Calgary, 2001.

World Commission on Environment and Development. *Our Common Future (Brundtland Commission)*. Oxford, Oxford University Press, 1987.

World Bank. *China 2020: Development Challenges in the New Century*. Washington: The World Bank, 1997.



Photo by Jeff Reading

When History Comes Alive, So Do We

Rebecca Lippiat-Long

Rebecca travelled to Croatia and Bosnia-Herzegovina in the fall of 2002. She travelled to Dubrovnik, an ancient walled city that is designated a UNESCO heritage site, and inland to Mostar, an equally ancient city that is still visibly scarred by the recent war. Both cities were heavily damaged by fighting. They took place there in the early till mid '90s. Dubrovnik appears physically recovered because of its UNESCO designation and its easy access to tourists. You have to look closely to see the mortar fire scars in the sidewalks or realize that the construction is reconstruction, not renovation. The war wounds that Mostar suffered, however, are as visible on the city as they are on the people. The following story is drawn from Rebecca's journal.

After spending a week in a small village, I find Mostar overwhelming. The diesel-belching bus deposits me on a busy street that feels very European. Big trees shade a multitude of cafes. The bakeries and fruit and vegetable shops are busy. Barbers open for the day and competing styles of music blast from the music stores and restaurants. Women stride down the street holding hands, pushing babies in strollers and carrying their shopping.

Men stand and gossip in front of stores.

I am on the Muslim side of the river, where so many of the buildings are shells of themselves, signposted as dangerous ruins. Trees and flowers have taken root in the rubble of the rooms and can be seen through pane-less windows. One apartment building is inhabited on the south side: vines, flowers, towels and other laundry decorate the balconies. The north side is a skeleton. Bathrooms and living rooms are visible through crumpled doorways and disintegrated walls.

I need a chance to get my bearings and I take refuge in a café. Its open front faces onto the busy street. My language skills are basic: *Molim, café molim?* (Please, coffee please?) You can't order a double-no-fat-latte-short-with-chocolate here. I receive a drink that has caffeine and tastes better than anything Starbucks could concoct.

When I sit down, a little girl approaches me. *Molim, kuna?* I shake my head. I could hand out money all day. I already gave some to a woman sitting on a piece of cardboard, with a baby in her arms. Where should I start and where do I stop? The little girl holds out her hand. Her fingernails are rimed with dirt. A trail of snot runs from her

nose to her upper lip. As she moves even closer, I smell urine. She asks again, pushing her hand nearer. Her hair is long and tangled and as dirty as the dress she wears. I make eye contact. Her eyes are huge and brown and beautiful.

The dirt and snot and the smell of pee become irrelevant. They are only social mores that we have established to separate *them* from *us*; the haves from the have-nots. We use the physical attributes that we all share to categorize people. Whose nose is dirtier? Who can't afford a handkerchief or a Kleenex? Them, not us. Then we say, "You are less than I, and I don't have to look into your eyes. You smell too bad to get close to, and I refuse to see your humanity. I refuse to see that you, little girl, are my sister, my child, my responsibility."

When I look at this little girl and really see her, I am rewarded with a huge smile. Her face shines and she is not a pathetic street urchin. She is me in a different life. She is me if my country messes up royally, if those interested only in power have their way. She is the victim of a chess match played by people who refuse to see her and refuse to look into her eyes. Yet still her smile is big enough to light up the world and pierce my heart.

When I leave Mostar, I am weighed down by the devastation. The sadness and anger of impotence were not always as visible as the crumpled apartment buildings and the dirty children, but they were still palpable.

I am wandering the narrow streets of Dubrovnik several days later. I am awed by the age of the city. I read in my guidebook that it was created out of two fishing villages dating back to Roman times. The channel separating the islands was eventually filled in and is now a street. I get a sense of the age of this street by the smoothness of stones, which the years have polished to a slippery gloss.

The walls of the city were erected during the 1200s and completed by 1500. I understand these dates

intellectually, but the time span is still hard to grasp. People have been living, working, fighting, loving, singing, playing, dancing, drinking, fishing, building and existing here on this very spot for thousands of years. And it is all here to see. It is like gazing through a telescope of time. As I walk down the street, I come across a walled-in door that is at the level of my knees. The bottom half has been obscured by time, life and paving stones.

I feel that if I had x-ray vision, I could see through the stones and through time. I could see how people lived, endured, survived and flourished. I could see how the people of this city dealt with the Serb bombing, the Napoleonic occupation, the arrogance of the Austro-Hungarian Empire, the despotism of Venetian

rulers, the greed of the Ottoman Empire and likewise, on and on into history.

As I continue my walk, I come into a small courtyard. Spray painted on the ancient wall is a peace sign and a soccer net, and a basketball hoop is nailed to the stones. I stop and stare. My first thought is that this would never happen in Canada. If we had a 500-year-old wall, it would be in a museum or behind glass. It most certainly wouldn't be covered in spray paint. But I love that it is. The past is not idolized here, but it is not forgotten either. There is a balance and intermingling of the past, present and future.

Rebecca Lippiat-Long is a peace activist and freelance writer who tries to see deeper than most into the heart of things.

Perma-What?

Janet Pivnick

Permaculture designers like to refer to their craft as being on the cutting edge of a 10,000 year-old technology. Although the term permaculture is not well known, the concepts that it builds on are derived from natural processes that have existed throughout time and are deeply rooted in the early histories of humankind's relationship with nature.

I took a course in ecological technology at the Institute for Social Ecology in Vermont in 1991 and the class visited Ben and Jerry's ice cream factory. It was certainly interesting to watch the process of making ice cream and the samples were much appreciated. However, the main purpose of our visit to the factory was to tour their on-site wastewater treatment plant.

Ben and Jerry's had installed what was then an experimental system called a living machine, developed by Ocean Arks Institute (formerly New Alchemy Institute). A living machine models its wastewater system on the processes of nature. We were essentially touring a greenhouse. The water passed through a series of tanks in a process of settling and aeration. In each of these tanks, a variety of plant life took the waste material in as nutrients, leaving clean water behind. Little did I know it at the time, I was witnessing the piloting of a type of permaculture design.

What Is Permaculture?

The concept of permaculture was developed in the 1970s by Bill Mollison, an Australian biologist and jack of all trades. He taught the design system to his first students shortly thereafter, and since then, thousands of people worldwide have become certified permaculture designers through institutes that exist around the globe.

The term was originally an abbreviated form of permanent agriculture, but over the years, the concept of permaculture has come to extend far beyond food growing, and the term is now interpreted as an abbreviated form of permanent culture. The notion of permanency is key. Permaculture is essentially about long-term sustainability.

Permaculture is first and foremost a system of design, including the design of housing and of food, water and energy systems. But this is design with a difference. Mollison (1988, 1) starts his seminal text on the topic by saying, "Although this book is about design, it is also about values and ethics, and above all about a sense of personal responsibility for earth care." Permaculture involves the design of sustainable living systems, as well as an entire way of understanding and approaching living.

Just like the living machine, the permaculture design system attempts to meet human needs in ways that honor and exist within the limits of nature. At the same time, permaculture uses nature as a model in determining ways to best meet those needs.

Permaculture designers like to say that the most important design tool is a hammock—that is, the design process begins with observation. Two years of observation is the suggested amount of time—watching the land move through the seasons and learning its eccentricities—before breaking ground. The land becomes the teacher, informing the designer about what it requires, what it can allow and what the right actions in a particular place would be. A subtle but radical shift in ethics occurs through this process. Humankind is returned to its place in the natural system, where it learns and responds to the earth. In this way, actions are appropriate, nonimpositional and rooted in understanding.

Mollison (1988, ix-x) states, "The philosophy behind permaculture is one of working with, rather than against, nature; of protracted and thoughtful observation, rather than protracted and thoughtless action; of looking at systems in all their functions rather than asking only one yield of them; and of allowing systems to demonstrate their own

evolutions.” Permaculture is a design process that aims to meet human needs in ways that are sustainable and don’t step outside of nature’s limits, while employing nature both as a model and teacher, and, consequently, placing humankind in a mutually responsive relationship with nature.

Top 10 Reasons to Introduce Permaculture into the Classroom

1. Permaculture teaches the skills of sustainable living. Permaculture teaches the next generation the actual, tangible, practical skills of living sustainably—those skills and arts that, to a large extent, have been lost in North America. Learning the skills of self-sufficiency not only raises the bar on sustainability practices beyond recycling and composting but also gives children the tools and comfort level to lead sustainable lives as adults.
2. Permaculture creates a significant change in consciousness. Permaculture does not preach, nor is it esoteric and philosophical. It is through action that a different way of thinking that is more rooted in an ecological consciousness can arise.
3. Permaculture is positive. Permaculture does not negate real-world challenges or become entrenched in doomsday scenarios; it is based in the idea that the problem is the solution. Constraints, such as dry climate, short growing season, community conflict or hilly topography, become resources within the design process. For example, a neighbor who doesn’t like the appearance of a newly permacultured yard is not misinformed, is not the enemy and is not cause to abandon one’s permaculture aspirations. Rather, he is a community member with legitimate concerns who needs to be listened to, respected and taken seriously. The challenge and the opportunity lie in finding creative ways to respond to his concerns while maintaining the permaculture project, resulting in a win-win situation and generating a sense of community in the process.
4. Permaculture is life-affirming. The needs, desires and lifestyle of those living with the design are key criterion in developing a design project. A moving water feature becomes part of the design for someone who loves the sound of a waterfall. Planting sweet peas along a pathway becomes part of the design for someone who finds the scent of sweet peas relaxing. Permaculture is not a negation of pleasure in order to serve the earth but a way of indulging in pleasures on behalf of the earth.
5. Permaculture is empowering. Nobody knows how a particular technology will work in a particular place with particular conditions. Nobody knows the best way of solving a particular challenge, whether it be installing a system of rooftop water catchment or constructing a herb spiral. Much of permaculture has been developed through thoughtful trial and error, and that is how it will continue to progress. Read all you can, ask lots of questions and give your project a try. There are no experts and there is no such thing as failure; there are only lessons to learn and refinements to make.
6. Permaculture is hands-on, active and participatory. This is a basic environmental education tenet.
7. Permaculture takes place in the real world and teaches about the real world. This is also a basic environmental education tenet.
8. Permaculture is sensible. The consumptive excesses that we strive for seem to bring with them a sense of unease. Living beyond our limits is a double-edged sword, bringing both material pleasures and spiritual dissonance. It is difficult in the middle of it all to see a different way of living. Permaculture offers a sensible way to live and seems to provide a sense of relief.
9. Permaculture is fun. The certification course that I took had us squishing around in clay in bare feet, trying to get the right consistency to make cob for a cob oven; weaving together pine branches to create a gabion to slow run-off down a slope and thereby reduce erosion; making twine and baskets from local plants; thinning a forest to reduce fire risk; building an A-frame level; and making maps. This work is fun, inspiring, messy and engaging while also being educational.

10. Permaculture fits in with a variety of curricular emphases. Looking at a permaculture design system takes into account both visible structures (plants, wildlife, built structures, water, landscape and solar and wind inputs) and invisible structures (legal codes, cultural priorities, financial realities and economic systems, educational systems, community concerns and history of people and place). Through this holistic approach, permaculture finds connections to many aspects of the mandated curriculum.

Fifteen More Equally Good Reasons

1. Permaculture teaches an ethic of care.
2. Permaculture education embodies an ecological consciousness.
3. Permaculture is tangible and concrete.
4. Permaculture design is adaptable, flexible, ongoing and ever-changing. There is always something new to learn.
5. Permaculture involves community and builds community.
6. Permaculture fosters teamwork and cooperation.
7. Permaculture is spiritual. It fosters wholeness, a sacred connection to the earth, an understanding that there is something beyond human enterprise and an understanding that humans are not the centre of the universe.
8. Permaculture is not airy-fairy; it involves specific tasks and methods.
9. Permaculture is purposeful.

10. Permaculture encourages and requires physical activity.
11. Permaculture teaches ecological understanding and develops a connection with the earth.
12. Permaculture develops and requires a wide variety of skills, such as mathematical and mapping skills.
13. Permaculture projects are rooted in a specific place and teach about that place.
14. Permaculture is pragmatic.
15. Permaculture requires and respects children's ideas.

Permaculture in the Classroom

Permaculture projects are numerous and varied. They include rooftop gardens; community or school gardens; rain catchment; small-scale renewable energy projects, including solar, wind and hydro-electric; greenhouses; composting; the use of natural building materials; the use of salvage materials; water conservation; ecological sewage treatment; libraries for books, tools, equipment and toys; wildlife corridors; wildcrafting; local economies; grey water systems; erosion control and so on.

None of these projects is beyond the scope of the classroom, but they require different levels of commitment from school administration and different amounts of class time, organization time and resources. Below are a few suggestions for small-scale, in-class projects.

1. Build and cook in a solar oven.
There are many designs for solar ovens—some elaborate and some

quite simple. The website www.solarcooking.org provides plans for a variety of solar ovens, including one made from a recycled pizza box.

2. Learn how to read the land. Any activities that develop children's observational skills are helpful. Increasing sensory awareness is only one part of reading the signs that the earth provides. It also requires a shift in attitude. Tom Brown's various nature guides are helpful with this (check out the website www.trackerschool.com). One of Brown's students, Jon Young, started the Wilderness Awareness School, which provides training material to assist with reading the land (check out the website www.wildernessawareness.org and look at the Kamana Naturalist Training Program).
3. Build an in-class living machine (check out the website www.oceanarks.org for resources).
4. Start a wildcrafting project. Wildcrafting is the harvesting of plants for the creation of everyday objects. It can involve naturally occurring plants, coppiced plants (wild plants used to provide a better harvest) or plants specially planted for the project. Projects can include making baskets, furniture, rope, twine and fire-starting material; and harvesting flowers for soaps, cosmetics and aromatherapy. Research is required to determine which plants are available for harvest in your area, what their uses are and what amount of harvesting is sustainable. Many field guides are available that provide information on local plant uses.

For More Information

- For permaculture certification courses, check out the website www.permaculture.net.
- For permaculture information and resources, check out the website www.permacultureactivist.net.
- For education programs related to permaculture, check out the website www.earthwisehome.org.
- For school tours of an ecological building or permaculture project

in the Calgary area, contact the Alberta Sustainable Home at (403) 239-1882.

- For project-specific information, try a web search. There are dozens of organizations, books and resources related to specific aspects of permaculture.

Reference

Mollison, B. *Permaculture: A Designer's Manual*. Tyalgum, Australia: Tagari, 1988.

Janet Pivnick is a certified permaculture designer and is the director of Earth Wise, an environmental education company based in Calgary.

Editor's Note: As a big fan of permaculture and its potential, I invite people in the Edmonton area who are interested in this concept to contact me about future demonstration gardens and workshops in Edmonton.

*An invasion of armies can be resisted,
but not an idea whose time has come.*

—Victor Hugo, *Histoire d'un Crime*, 1852

Poetry

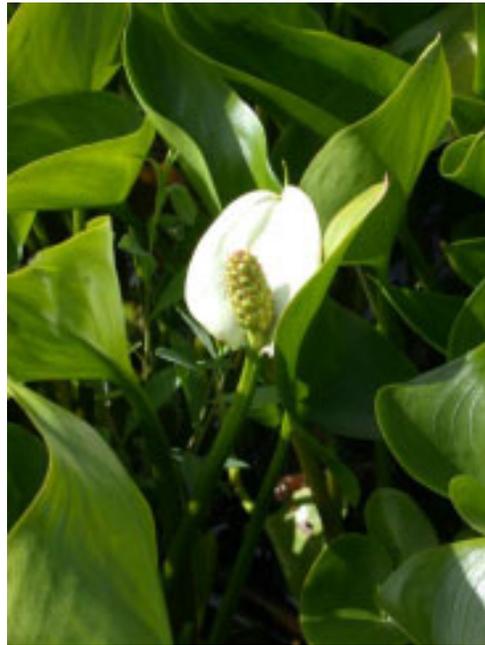
The How and the Why, or For Love of Humanity and Earth

Janina Carlstad

Fed by sharing, love and thoughts,
Which in connection grow,
Ideas and inspiration thus
Are brought about to flow
Like a cloud of silver hopes
Buoyed up in the light of the sky,
Floating up above, shedding drops
Of energy, on high,

Support for one another, faith
Keeping connections alive,
Beauty in the mind's eye
And hope, for which we strive . . .

Joining thus, we share a strength
In wonder, joy and love,
And with conviction move as one,
Enveloped in this cloud above.



Resource Feature

Enviro-RIT Youthink Enviro- Summer Camp

Youthink would like to extend an invitation to students ages 9–12 to participate in a fun and rewarding summer camp. This opportunity will offer a new outlook on learning about and exploring creativity and the environment, encourage students to achieve success in their pursuit of individuality and help students discover talents they didn't know they possessed. This unique experience will also allow students to publish their creative works for friends, family and community members to see at an open house in September.

Youthink is proud to present Enviro-Reporters in Training (RIT) camp, beginning on July 9 at Fish Creek Provincial Park in Calgary, Alberta. The camp introduces students to the journalism process with an environmental focus and is placed in the great outdoors. All students ages 9–12 are welcome to attend.

The purpose of Enviro-RIT is to engage youth in environmental issues in their community. Hands-on activities will instill a sense of awareness and direct responsiveness to issues affecting the environment.

Participants will have the opportunity to explore different paths of creativity, including writing, drawing, photography and videography, as well as conduct

interviews with special guests and play detective in the search for answers.

Interactive communication and teamwork will allow each participant to experience success at his or her own level of ability.

The final outcome of the camp will be a minizine publication that will be available to all participants at an open house in September, where there will also be a viewing of the video created.

Transportation to the camp is provided to and from downtown Calgary every day. The cost is \$165 for the five-day camp. Bursaries are available for those who need financial assistance. There are four camps in total: July 9–13, July 16–20, July 23–27 and August 13–17.

Through the power of words and illustration, this camp aims to encourage awareness in students on environmental issues and increase literacy so that lives will be impacted for years to come. Please contact Krista Duckworth, Alan Tong and/or Angela Simmons at (403) 262-9983 for registrations and questions. Thank you.

Youthink Publications Society is a nonprofit charitable organization committed to advancing and encouraging literacy through publishing, communications and special projects. Enviro-RIT is in partnership with the TD Friends of the Environment Foundation, Fish Creek Provincial Park and Youthink Publications Society.

Curriculum-Linked Canadian Educational Resources Help Students Discover Engineering

High school science teachers can now meet their learning objectives with the help of a free, interactive educational resource designed to encourage students to consider a career in engineering by helping them understand the link between science and engineering.

Generation-E: A New Brand of Engineer features teaching and guidance material for Grades 9–12 that is designed to meet the standards of the Pan-Canadian science curriculum and the science curricula of each province and territory.

"Canada is the third largest exporter of engineering talent in the world," according to Boivin, president of the Association of Consulting Engineers of Canada (ACEC), the lead organization on the initiative. "Yet, it's our sense that at home, many creative young people aren't looking at engineering as a career because they might not consider it interesting or exciting."

Attracting young people to engineering is key. The ACEC notes that fewer engineers are choosing to enter the consulting engineering business. At the same time, The

Canadian Council of Professional Engineers (CCPE) is concerned about the results of federal government research that showed that by 2011, Canada will be facing a shortage of skilled workers in all fields. The engineering profession could help meet the objectives of the skills agenda—created to address workforce issues—by attracting talented students to careers in engineering.

It was also felt that many students are not considering engineering as a career because they think it focuses solely on math and science. The best engineers, however, are well-rounded people with diverse skills.

Focusing on Linking Things to Engineering

The *Generation-E* campaign is the result of two years of effort on the part of engineers, teachers, students, guidance counselors, engineers and career professionals. It encourages students to understand the link between everyday items they see around them and the talent of Canadian engineers, and then consider becoming an engineer themselves. Hockey helmets, pacemakers, walkie-talkies and wind turbines are just four examples of Canadian engineering ingenuity.

Meet Jenni

Jenni, a female character created to anchor the student portion of the *Generation-E* program, represents

that ingenuity. She is strong, independent and smart, and embodies the new brand of engineer. She will appear on the students' interactive website and the large classroom poster that outlines hands-on science projects. These projects challenge students to work in teams and think creatively, just like professional engineers.

"In developing the teachers' materials we knew that we had to create something that linked engineering to science and, specifically, teachers' curriculum objectives," said Heather Mace, a science teacher in the University of Ottawa's faculty of education. "We've done that by linking the science projects to the specific learning objectives of every province and territory—a level of detail teachers don't often find in their resources."

The *Generation-E* program consists of three main components:

- A teacher's kit, featuring four hands-on projects linking science and engineering, and meeting the curriculum objectives in each province and territory. The kit also contains tracking sheets so that students can record their work in the same way as an engineer.
- A guidance counsellor kit to help guidance counsellors give students information about the variety and nature of engineering careers.

- An Internet site, www.generation-e.ca, that features online training for teachers and guidance counsellors, as well as a section for students that includes a comprehensive range of interactive tools and resources about the fascinating world of engineering.

The development of *Generation-E* has been led by the ACEC through a grant from Human Resources Development Canada's Youth Employment Strategy.

For more information, contact Marie-Claude Brossard, project coordinator, phone: (514) 842-1433, ext. 369; e-mail: mcrossard@everestcommunication.com.

Human Security Website for Youth

The Department of Foreign Affairs and International Trade has launched a new website designed to engage youth on human security issues. Youth Zone is principally a research and teaching tool aimed at high school and university students. It features information on Canada's Human Security Program, as well as stories and photographs of young people who have participated in human security initiatives, including peacebuilding. The Youth Zone website can be accessed at www.humansecurity.gc.ca/youth.

What's Happening (and Where)

Learning from the Voices of the Earth

Mark March 7 and 8, 2003 on your calendar. A new and unique conference is in the works for spring inspiration.

If your work or passions take you into community gardens, schoolyard greening plans, habitat restoration or naturalization projects, this conference is for you. Whether you love feeling the soil turning under your spade or opening peoples' eyes to growing sustainable hope, your commitment will find fresh encouragement here. Join us in connecting people to the Earth.

Check out www.voicesofthesoil.org for program details and registration information. There will be something for all lovers of the earth. A brochure/registration form (in pdf format) and a conference program are available on the website. Early bird registration is now available.

The conference will be on the evening of Friday, March 7, and Saturday, March 8, at King's University College, 9125 50 street, Edmonton, Alberta.

For more information, contact Catherine Duchesne, Voices of the Soil, lduchesne@compusmart.ab.ca, (780) 473-3162; or Kathy Goble, Evergreen, kgoble@newlinc.com, fax (780) 413-9373.

Edmonton Seedy Saturday 2003

There will be two Seedy Saturdays in the greater Edmonton area in 2003. All Edmonton and area Seedy Saturdays are from 10 a.m. to 3 p.m., cost \$2 and have lots of great presentations, talks and workshops. All feature heritage, open-pollinated flower, herb and vegetable seeds to buy sell or swap, great gardening ideas and much more. For more information, see the webpage www.seedysaturday.ca/Events/ByDate2003.htm. For display space or other details, contact the individual location coordinators listed below.

Saturday, March 1, 2003

At the Forget-Me-Not Greenhouse, located on the corner of Highway 16A and Hubbles Lake Road, seven kilometres west of Stony Plain, Alberta. For information, a table or presenter opportunity, contact Simone at (780) 963-8162 or forgetme@telusplanet.net.

Saturday, March 8, 2003

At King's University College, 9125 50 Street, Edmonton, Alberta, from 10 a.m. to 3 p.m. There is lots of free weekend parking on and easy access from 50 Street. For information, a table or presenter opportunity, contact Chris at (780) 468-2796 or garden@mkids.com.

Permission For Use of Photograph/Student Work

Date _____

The Alberta Teachers' Association (ATA) requests the permission of parent(s)/guardian(s) for the reproduction of photograph(s) depicting their child(ren)

And / Or (please circle one)

the reproduction of written work completed by their child(ren). The photograph/written work will be reproduced in the Global, Environmental and Outdoor Education Council specialist council newsletter/publication, *Connections*, and is intended for the purpose of teacher professional development.

Name of child: _____ (Please print)

I, _____
(Printed name of parent/guardian of child named above)

agree to the use of this photograph/written work for the purpose stated above.

Signature _____

Relationship to child _____

Address _____

_____ **Postal Code / Zip Code** _____

We have recently begun posting archived issues of *Connections* on the Internet. (www.geoec.org/connections). Are you willing to have your child's written work on the Internet as well?

- Yes, I agree to have my child's written work on the GEOEC internet site.
- Yes, I agree to have my child's written work on the GEOEC internet site, using a first name ONLY.
- No, I DO NOT want my child's written work posted on the GEOEC Internet site.

Please fax or mail forms to:

Karen Virag
Publications Supervisor
Alberta Teachers' Association
11010 – 142 Street NW
Edmonton, Alberta, Canada T5N 2R1
Phone: (780) 447-9491
Fax: (780) 455-6481

Thank you!

Global, Environmental & Outdoor Education Council

Mission Statement

To promote involvement in quality global, environmental and outdoor education

Objectives

- To provide a vehicle for Alberta teachers for professional development and communication in global, environmental and outdoor education
- To study and make professional recommendations about global, environmental and outdoor education issues
- To network with other provincial organizations that have similar concerns

Membership

- Regular member—Members of the Alberta Teachers' Association, as specified in ATA bylaws, are entitled to full privileges of council membership including the rights to vote and to hold office.
- Student member—Student members of the ATA are entitled to all benefits and services of council membership except the right to hold office.
- Affiliate member—Persons who are not ATA members as specified by ATA bylaws receive all the benefits and services of council membership except the rights to vote and to hold office.

Publications

- The GEOEC recognizes the wide range of interests among members and strives to foster the exchange of

ideas and provide information and articles relating to the various components of the elementary and secondary curricula through publication of *Connections*.

Annual Conference

- The annual conference features a blend of activities, indoors and outdoors, ranging from hands-on workshops to social gatherings. All grade levels are represented in sessions. The emphasis is on practical information and application. The annual general meeting of the GEOEC is held in conjunction with the conference.

Executive

- Volunteer teachers are elected to serve on the GEOEC executive.
- Contact the president of the GEOEC through the ATA office if you are interested in running for a position.
- Elections take place at the annual general meeting during the conference.

Environmental Action Representatives (EARs)

- News to and from your provincial area is relayed through a person acting as a GEOEC representative for that school area.
- If you are interested in being an EAR for your school, please indicate so on your membership application.

Enviroshops

- Various activities and workshops organized by the Council
- Presentations in different locations around the province

JOIN NOW AND BECOME INVOLVED IN THE GLOBAL, ENVIRONMENTAL & OUTDOOR EDUCATION COUNCIL

Name _____ Alberta Teaching Certificate No. _____

Address _____ Postal Code _____

School or Employer _____ Grade Level/Specialty _____

New Membership

Renewal of Membership

\$25.00 Regular and Affiliate Membership

\$12.50 Student Membership

\$45.00 2-year membership

\$30.00 Subscription for nonmembers

\$65.00 3-year membership

I would be interested in serving as an Environmental Action Representative Yes No

Make cheque payable to the Alberta Teachers' Association and mail it with the application to the Association at 11010 142 Street NW, Edmonton T5N 2R1.