

# Connections

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The journal of the Global,  
Environmental & Outdoor  
Education Council



To promote involvement in  
quality environmental and  
outdoor education

# What GEOEC Does

The Global, Environmental & Outdoor Education Council (GEOEC) is an interdisciplinary specialist council of the Alberta Teachers' Association. Our mission is to provide resources and venues for dialogue and networking, as well as to promote quality professional development for Alberta teachers in the area of global, environmental and outdoor education. Members receive current news items, teaching ideas, information about our workshop series, and food for thought through our quarterly journal *Connections*. We are also active on Facebook ([www.facebook.com/geoecalberta](http://www.facebook.com/geoecalberta)) and Twitter (@GEOEC), with up-to-date information on PD opportunities and initiatives in Alberta.

# CONTENTS

Message from the Editor .....	2	Antonella Bell
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## GEOEC BUSINESS AND NEWS

President's Message .....	4	Don McLaughlin
GEOEC Executive 2013/14 .....	5	
GEOEC Award Winners 2013 .....	7	
Call for Award Nominations .....	9	

## ARTICLES

### Past

Taking a Walk Down the GEOEC Memory Lane.....	10	Suzanna Wong
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### Present

Youth Summit 2013 .....	13	Natasha Sarkar
Green School—Preparing the Soil .....	15	Antonella Bell
Education for the Environment .....	18	Bonnie Shapiro
Silence in the Park .....	20	Kevin Van Tighem

### Future

Looking Forward—Envisioning Future Scenarios in Classrooms.....	25	Monica Chalal
Inner Climate Change .....	27	Kim Wallace
Currents of Environmentalism .....	29	Michael Kohlman
The Anthropocene: The Sixth Extinction .....	36	jan jagodzinski
What Should Our Kids Learn About Energy? .....	38	Gareth Thompson

## PROFESSIONAL DEVELOPMENT

ATA Library .....	40	Sandra Anderson
Miscellaneous PD Opportunities .....	42	
Earth Matters Conference 2014 .....	44	

## ACTIVITIES AND CONTESTS

### Activities

Making Ice Cream with Snow .....	45	
Snowflake Watch .....	45	
Canada's Coolest School Trip 2014.....	45	

### Contests

Emerald Award Winners 2013.....	46	
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# Message from the Editor



Hello, everyone! Welcome to the latest issue of *Connections*. The Global, Environmental & Outdoor Education Council (GEOEC) turns 30 this year, so this issue focuses on the past, present and future of *Connections* and global, environmental and outdoor education. The council's partnership with the Alberta Council for Environmental Education (ACEE) and the Earth Matters Conference offers exciting opportunities to grow and highlight our cause. As global and environmental issues take centre stage around the world, teachers must talk about these concerns with students. Support is available from the council and its publications, such as *Connections* and the e-newsletter, to help members address these difficult subjects.

This issue begins with "Taking a Walk Down the GEOEC Memory Lane" with Suzanna Wong as she talks to some former GEOEC presidents. This stroll will likely continue in the next issue, because not everyone was able to respond in time for this one. Reconnecting with past executive members has spurred on a possible reunion of GEOEC "oldies," as Wong puts it. She is allowed to say that, because she is one herself. As program manager for Youth Wavemakers, Natasha Sarkar organized the ninth annual CAWST Wavemakers Youth Summit, in Calgary. About 150 inspired youth investigated local and global water challenges, and Sarkar tells us about this exciting event in her article. Bonnie Shapiro, coordinator for an exciting new graduate-level offering at the University of Calgary, entitled Education for the Environment, shares aspects of this unique and important program. This is a wonderful opportunity for Alberta teachers to receive credits toward a master's degree and become experts in the field of environmental education. *Alberta Views* kindly allowed us to reprint Kevin Van Tighem's thought-provoking article entitled "Silence in the Park." I am sure that many of us can relate to Van Tighem's words and to his concern about climate change in the parks. Monica Chalal, doctoral student at the University of Alberta, writes about hip-hop based education. This is definitely cutting-edge pedagogy and one that might be particularly interesting for high school teachers to reach those seemingly unreachable students. Having recently completed her master's degree, Kim Wallace shares her thoughts on the topic of her thesis: the inner climate. Many believe that our inner world and the condition of our outer world are connected, and it certainly looks to be an interesting trend to keep an eye on. Michael Kohlman addresses the perennial issue of the Alberta oil sands with an interesting perspective on the different currents of environmentalism and how they are at times most definitely counterproductive. His article clarifies the need to show a united front on this important issue. "The Anthropocene" is a rather dismal, but intentionally so, look at the future of our species. Jan Jagodzinski, professor in the Faculty of Education at the U of A, is continually looking at ways to jolt people out of their complacency to bring about significant change in how we educate our children and live our lives. Finally, I was asked to share my experience of Green School, a unique nature immersion experience for elementary classes, at the U of A Devonian Botanic Garden.

In the professional development section, Sandra Anderson comments on some exceptional new resources from the ATA library. Here you will also find opportunities for teachers to join discussion groups, blogs and pertinent special session courses tentatively offered by the U of A in 2014. In the activities and contests section are fun winter activities for students of all ages and the 2013 Emerald Award winners.

As newly appointed publications editor, this issue has definitely been a steep learning curve for me, but I certainly have enjoyed the journey. I want to sincerely thank all of the contributors and the ATA editing staff for helping along the way. I hope that you will find something helpful or at least thought-provoking in this issue. I am always open to feedback and suggestions for articles and themes for future issues, so please feel free to contact me.

The next issue will focus on arts-based learning regarding global, environmental and outdoor education. I will be looking for submissions based on this theme, and the deadline for submissions will be March 15. The following issue will highlight wisdom traditions, in particular Indigenous perspectives and how they are intertwined with global and environmental issues. Submissions will be due on June 15. Please send submissions and feedback to me at [antonella.bell@ualberta.ca](mailto:antonella.bell@ualberta.ca).

*Antonella Bell*

# GEOEC Business and News

## President's Message



2013 marked a year of dramatic change for the Global, Environmental & Outdoor Education Council (GEOEC). In April we cohosted the 2013 Earth Matters Conference, in Canmore, with the Alberta Council for Environmental Education (ACEE), and met and worked with professionals from the many disciplines that our council represents. All of the executive positions were filled, and executive members represent a good cross-section of the membership-sharing positions. Many of our talented executive members presented sessions at the Beginning Teachers' Conference, in Edmonton and Calgary, last fall.

The executive members enjoyed amazing weather for the fall planning retreat at the Shunda Creek Hostel, near Nordegg, in October. We laid the groundwork for our work with ACEE and the 2014 Earth Matters Conference, in Canmore, this coming April. Go to [www.geoec.org](http://www.geoec.org) for more information and a chance to be one of the first 100 delegates to get the early-bird registration rate. We examined our membership needs and plan to potentially offer a more traditional conference at the Palisades Centre, in Jasper, in 2015. We explored the possibilities of hosting a future conference in the Nordegg area with a hike up Shunda Mountain to the Alberta fire lookout.

We are working with ACEE to finalize plans for the 2014 Earth Matters Conference and examining the possibility of cohosting a national conference in 2015.

Last I would like to thank the executive for their hard work and dedication in providing members with many rewarding professional development opportunities:

- Antonella Bell—for taking on the task of editing *Connections*
- Daniel Espejo—for designing our new website
- Breanne Oakie-Carriere and David Bernier—for their work with e-news and social media connections
- Natasha Sarkar and Andrea Zeiler—for their work to support global education
- Kathy Worobec—our community liaison and representative from AACE
- Suzanna Wong, treasurer, and Jessica Prodor, secretary—for their outstanding support
- Peter Lenton—our valued membership and public relations coordinator
- Jere Geiger—for his advice and expertise
- Mike Kischuk—our highly valued source of advice and the ATA staff advisor

I hope our members enjoy this issue of *Connections* and have a pleasant and rewarding 2014.

*Don McLaughlin*

# GEOEC Executive 2013/14

Don McLaughlin, newly elected president, is an elementary school teacher in Calgary who has long had a passion for global, environmental and outdoor education. He joined the executive in 2009 and says that he has had the good fortune of working with many inspiring Alberta educators. He can often be found on weekends in the backcountry exploring the less-travelled trail with his family. I have not had the good fortune of hiking with him yet, but I have been told that it is a bit like following a mountain goat up the hill!

Natasha Sarkar has been the community liaison–global education advisor since April 2013. She is the Youth Wavemakers program manager at CAWST (Centre for Affordable Water and Sanitation Technology), a nonprofit organization, in Calgary, that trains organizations that work directly with populations in the developing world that lack access to clean water and basic sanitation. Natasha has been working in education and youth-oriented programs since 1996. She has a keen interest in global citizenship, water and sustainability, and brings strong skills, knowledge and experience to both positions.

Andrea Zeiler joined GEOEC as global education advisor as a means to listen and contribute to the global discussion in our current education system. She has been busy with school and is excited to be in her final semester in development studies at the

University of Calgary. Andrea is finding her courses engaging and challenging and is learning a lot about international development work, which has made her start to think about possible career opportunities once she graduates. It is wonderful to have such a passionate and committed young adult as one of our global education representatives.

Peter Lenton is delighted to be able to devote his days to tapping the universal language of music to inspire environmental literacy and global citizenship, and helping kids discover their talents and passions. This keeps Peter travelling through many educational communities, which situates him well to be our membership and public relations director. He is working on reconnecting with past members (as well as reaching out to new teachers in training) to see how GEOEC can help Alberta teachers by empowering and building synergistic relationships between educators/ students and organizations that focus on achieving sustainable, ecological, global development and educational goals.

David Bernier is a teacher at École La Mosaïque, an elementary francophone school in Calgary. He is passionate about teaching topics related to sense of space and place, and their relationship to our environment. David looks after our social media portfolio in conjunction with Breanne Oakie-Carriere.

Breanne Oakie-Carriere is president-elect and professional development director. She has always had an interest in the outdoors and how we are all connected to its wildness as well as the peacefulness. She teaches junior high outdoor education and is on the Earth Matters Conference committee.

Jessica Prodor is in her third year of teaching and working for the Edmonton Catholic School District. This year she is teaching 100 Voices at St James School. Jessica is involved with GEOEC because of her passion for global citizenship, and environmental and outdoor education. She believes that students today are 21st-century learners and that they must discover how to become global citizens in our diverse and changing world. She also believes that students must have opportunities to play outdoors and learn in nature. Jessica is GEOEC's most efficient secretary!

Kathy Worobec is ACEE's education director and the community liaison for GEOEC. She has more than 20 years' experience in developing, implementing, delivering and managing environmental education programs for youth and teachers. Kathy has taught in the classroom, worked in the energy efficiency field with the Alberta Department of Energy and worked as a consultant. She received her education degree from the University of Alberta. Kathy lives in Edmonton and enjoys

biking, skiing and gardening, and numerous activities with her family and friends.

Michael Kischuk joined GEOEC in 2011 as ATA staff advisor to assist with the operation of the council. Mike joined the ATA in 2003 in the Teacher Welfare program area, which is responsible for collective bargaining and grievances, pensions, health benefits, workplace health and safety, human rights, employment insurance, sick leave and medical accommodation, and education finance. Mike is a music and math specialist and has taught at all grade levels except kindergarten. Mike lived in a house but grew up in the valleys and on the banks of the North Saskatchewan River, in Edmonton, and has been committed to environmental and global causes since his early teens.

Jere Geiger is a Provincial Executive Council member of the

ATA and is a district representative for Central Alberta. He has been GEOEC's PEC liaison for many years, and his passion is global education with keen interests in environmental and outdoor education. He is a full-time teacher in Alder Flats.

Suzanna Wong is a doctor of philosophy candidate at the U of A, Elementary Education Department—Language and Literacy. Her research focuses on preschoolers' multiliteracy practices at home and their parents' perspectives. Suzanna is particularly interested in young children's early multiliteracy practices and how contemporary technology tools can be used to extend early literacy learning. Her lifelong passion is global, environmental and outdoor education.

Daniel Espejo is an educational technology consultant who focuses his time on global education and digital citizenship. The proliferation

of social media is providing a platform for students to connect with the entire world, yet mainstream media too often shares the negative consequences of the Internet, including cyberbullying. In response, Daniel is developing resources that will help students realize the positive influence they have on the world and how they can leverage their social networks to be change makers in an increasingly globalized world. Daniel is GEOEC's website manager.

Antonella Bell joined the executive recently as editor of *Connections*. Her background is education, and most recently she was education coordinator at the Devonian Botanic Garden, where she started a nature immersion program called Green School. Partly due to the success of that program, she returned to school to do a doctorate looking at ways to reconnect children to the natural world.



Front row (l-r): Andrea Zeiler, Jessica Prodor, Suzanna Wong and Michael Kischuk

Back row (l-r): Peter Lenton, Breanne Oakie-Carriere, Natasha Sarkar, David Bernier and Don McLaughlin

# GEOEC Award Winners 2013

## Distinguished Fellow Award

### Michael Mappin

Mike Mappin, coordinator, K–12 Experiential Education Programs, University of Calgary Biogeoscience Institute, retired this year. Those who know Mike would agree that this is a significant loss to environmental education of young people in Alberta and emerging environmental educators. His contribution to environmental education in Alberta has been huge.

During his lifelong journey, he has affected the lives of many people, and for some, Mike was the very reason they embarked on environmental careers. However, I am pleased that Mike's commitment to environmental education was recognized this year with an Emerald Award for individual commitment to environmental education and the Distinguished Fellow Award from GEOEC. Mike truly deserves both awards, which publicly recognize an amazing person who has touched the lives of so many people and quite literally has made a difference

to this planet. We wish Mike well on his retirement and know that his environmental education journey has not yet ended because he will continue to contribute to graduate education courses at the universities of Calgary and Alberta. However, during his transition period from his formal work at Barrier Lake Field Station, we wish to thank him and wish him well on behalf of the Alberta environmental education community.

*Susan Barker, Vice-Provost,  
Student Experience,  
University of Calgary*



*L to R: Jeff Reading, Mike Mappin, Sue Arlidge and Christina Pickles*

## Appreciation of Service Award

### Lara Fenton

Lara Fenton received the 2013 Appreciation of Service Award. She served as publications editor for GEOEC from 2009 to 2012 and was responsible for curating interesting and informative articles and resources for *Connections*. While on the executive, Lara contributed to the work of the council through her excellent insights and love of environmental and outdoor education. Lara provided this service to the council and its membership while completing her doctorate at the University of Alberta. She now

serves as a lecturer and recreation research liaison at the U of A and continues to strive for excellence in environmental and outdoor education. To read her complete curriculum vitae is an opportunity to be wowed by the contributions that one person can make to the betterment of the world.

*Jessica Scalzo, former GEOEC President*

## Award of Merit

### Canadian Geographic Education/Shell Canada Energy Diet

The Canadian Geographic Education Classroom Energy Diet Challenge is a competition between

Canadian classes from K–12. Students learn valuable lessons about energy use and share that knowledge with the rest of the country. The challenge is about increasing energy awareness among Canadian youth and educators. Throughout the program, classes complete a series of energy-themed, curriculum-based challenges to learn about diverse energy issues. The Energy Diet is now entering year two and is expecting a significant increase in the over 400 classrooms nationally that participated in 2012. Gavin Finch accepted the award on behalf of Canadian Geographic and Shell Canada.

## Calgary Mayor's Environment Expo

The Calgary Mayor's Environment Expo (CMEE) is a gathering for schools and the public to explore community-driven initiatives for sustainability. The Expo features displays to demonstrate all aspects of sustainability: transportation, animal welfare, recycling and composting, parks, and education. CMEE highlights showcase schools whose dedicated and passionate students display their own initiatives developed within their schools and communities and in a regional setting. Michael Gray accepted the award on behalf of the CMEE.



*L to R: Jessica Scalzo, Lara Fenton and Don McLaughlin*

# Call for Award Nominations

At its annual conference, the Global, Environmental & Outdoor Education Council of the ATA honours those people who have contributed to global, environmental and outdoor education. As a member of the council you have the opportunity to nominate a deserving person for recognition. There are three categories of awards:

- **Appreciation of Service Award**

The Appreciation of Service Award is presented to member and nonmember individuals and organizations in acknowledgement of service contributing to the professional growth of GEOEC members.

Considerations include service, events, hosts, materials, sponsors, affiliate organizations and departments that have been of significant benefit to the council.

- **Award of Merit**

The Award of Merit is presented to member and nonmember individuals and organizations in recognition of exemplary teaching, leadership or service in the field of global, environmental and outdoor education.

Considerations include teaching, leadership or service representing a significant commitment of effort and time; effective influence on the development of global, environmental and outdoor education in a region, province or nation; contribution to the awareness and understanding of an environmental ethic; or extension of teaching practice, research, legislation or funding in global, environmental and outdoor education.

- **Distinguished Fellow Award**

The Distinguished Fellow Award is presented to a member in acknowledgement of outstanding achievement and distinguished service in the field of global, environmental and outdoor education. Considerations include years of service, significance of achievements, effect of leadership and commitment to the Council's development and operations.

## How to Nominate

Please contact GEOEC president Don McLaughlin at [president@geoec.org](mailto:president@geoec.org), prior to February 28, 2014. Nomination forms are available on the GEOEC website at [www.geoec.org/?page\\_id=111](http://www.geoec.org/?page_id=111).

# Articles

## PAST

### Taking a Walk Down the GEOEC Memory Lane

Suzanna Wong

*We look at the present through a rear view mirror. We march backwards into the future.*

—Marshall McLuhan and Barrington Nevitt, *Take Today: The Executive as Dropout*

As Marshall McLuhan (1972) so elegantly stated, our future is framed from our past. This year the Global, Environmental & Outdoor Education Council (GEOEC) is celebrating its 30th year as a specialist council. When I look back at my GEOEC (previously named Environmental and Outdoor Education Council [EOEC]) rear view mirror, I feel privileged and honoured to have worked with so many innovative, creative and passionate educators for the last 25 years. They have inspired me, challenged my thinking and encouraged me to be a better person living on planet Earth. The

GEOEC truly believe that “There are no passengers on spaceship earth. We are all crew” (McLuhan 2003). As a specialist council, the executive members always worked and played collaboratively over the years together. As you will notice, the following vignettes from our former and current GEOEC executive members reflect the inspiration and dedication of a powerful driving force in the past, present and future of global, environmental and outdoor education in the world.

#### Jeff Reading

*Jeff Reading held many portfolios including professional development coordinator. He provided many fantastic workshops for teachers.*

I joined GEOEC in its second year of operation and stayed connected with the organization for more than 20 years. It was quite simply the most significant

professional move I ever made. It connected me with some of the most outstanding and dedicated people I have ever worked with from across the province. They became my closest friends, and I cherish the experiences that came with my association with the EOEC/GEOEC. In the early days, the EOEC fostered a unique bond between educators in schools and nontraditional sites like outdoor centres, parks and safety organizations. The EOEC was a lone voice for collegiality among a diverse group of outdoor and environmental educators dispersed across the entire province. The early days offered much excitement, just to name a few:

- George Taven building out the *Connections* newsletter and journal
- Ron Sweet designing a professional development network

- Jim Martin forging solid relationships with the provincial government
- Joy Finlay advocating for an elevated role for environmental and outdoor education in the program of studies
- Nestor Kelba organizing conferences and events

Although the council has never really been a large organization, its accomplishments are many with the development of the only stand-alone curricula in environmental and outdoor education in Canada being just one of them. The legacy of the GEOEC is significant, and I am proud to have been associated with its contributions to education in Alberta.

## Gareth Thomson

*Gareth Thomson held many portfolios including serving as president for many terms (almost president for life) and conference chair. Currently, he is the conference chair for Earth Matters 2014.*

I have fond memories of my time with the GEOEC, and it was a privilege to work with those committed teachers. I learned so much from them.

I take some personal pride in putting the *G* in GEOEC. The year I became president also marked the year that CIDA pulled the funding from its Canada-wide network of global education projects. Despite the valiant efforts of good folk like Earl Choldin and Sara Coumantarakis, Alberta's Global Education Project closed shop. We chatted with our Social Studies Council colleagues, determined that

they had no interest in taking on the *Global* education mandate, and on a bright sunny afternoon at our Waterton conference, the membership determined that our council (then the EOEC) would only benefit from including and providing a convening space for the Global educators of the province. Thus, the GEOEC was born.

Note: The following excerpt is from our e-mail conversations about who was president for which years:

*Gareth:* Based on my extensive readings from various banana republics, I made bid in 1995 to become president for life but was ousted by the tiny, perfect Suzanna Wong in a (relatively) bloodless coup d'état.

*Suzanna:* Actually, it was a very peaceful demonstration in the square of Canmore.

## Sara Coumantarakis

*Sara Coumantarakis was the former editor of Connections for many years.*

Over the years GEOEC conferences gave me an often-needed dose of hope. The issues seemed daunting, but every year the positive energy generated at GEOEC conferences was palpable. The commitment of teachers, the enthusiasm of youth, the expertise of keynote presenters, the practicality of workshop leaders, glorious settings and infectious fun made these conferences like family reunions. You had to love them!

When I look over the list of keynote speakers, I realize how much my world view was affected by their presentations. The voices of

change came to GEOEC to inspire educators toward a world of peace, sustainable development, human rights and environmental security: David Selby, David Suzuki, Stephen Lewis, Vandana Shiva, Lloyd Axworthy, Elizabeth May, Toh Swee-Hin, David Schindler, Craig Kielburger and so on. I'm indebted to the hard-working colleagues who made it happen year after year.

## Pat Worthington

*Pat Worthington held many portfolios including president and conference chair.*

My years with the GEOEC provide many fond memories. Amazing learning, activities and adventures were the norm through the years in which I was involved. But really, it was the exceptional people who made and make this organization so special. My memories of GEOEC will last my lifetime; I am truly fortunate to have worked with such great people. Thank you!

## Rita Poruchny

*Rita Poruchny held many portfolios including president, professional development and conference chair.*

Being a part of GEOEC was a great honour and pleasure. The people who are and were a part of this specialist council are passionate and dedicated folks who truly do make a difference on this planet. Some of my most favourite memories are the conferences. The conferences at the Yamnuska Centre at the beginning were rustic and certainly influenced me in my teaching practice. The evening

workshops were some of the most memorable. I will always remember Peter Lenton appearing out of nowhere, singing. It was magical. Having Chellis Glendinning, Vandana Shiva, David Schindler and David Suzuki, just to name a few, as keynote speakers certainly demonstrates the breadth of the council.

We were a small council but our ideas and plans were large. We worked hard to provide the best professional development for teachers. Our work with other environmental and global education groups around the province was the cornerstone of our success. We were always at the leading edge of excellent resources for the classroom. The ATA sometimes had difficulty knowing what to do with us. Membership to our council is still offered to people who are a part of the environmental and global education community. Here is to another 30 years to the council!

## Louella Cronkhite

*Louella Cronkhite held many portfolios including president, secretary and global education advisor for many years.*

I think fondly about my years with GEOEC. In fact, I was on the organizing committee for the first conference in 1999, in Waterton, when the EOEC voted to include global education as its mandate. What followed for me were several years in which I was secretary and then president of the council. The conferences were always special times when global and environmental educators came together as family and created amazing opportunities for students. We had the privilege of learning from the best, from both near and far.

I've been with Alberta Environment and its various incarnations for nine years now. It's been a great learning experience, and I continue to discover something new every day.

My GEOEC rear view mirror only spotted a few former members this time; however, I intend to turn on my high beams and search for more former members to share their fond memories of being part of the crew in this powerful organization. Contact me if you wish to contribute your story for our next walk down memory lane.

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*Suzanna Wong is a PhD candidate at the University of Alberta, Elementary Education Department—Language and Literacy. Her current research focuses on preschoolers' multiliteracy practices at home and their parents' perspectives.*

# PRESENT

## Youth Summit 2013

Natasha Sarkar

On November 5, 2013, 140 high school students made waves at the ninth annual CAWST Wavemakers Youth Summit, held at Calgary's TELUS Spark Science Centre. Students were challenged to investigate local and global water issues through meaningful discussion, group activities and team project planning. Through the Youth Summit, CAWST (Centre for Affordable Water and Sanitation Technology) aims to inspire students with the knowledge and support to take on water issues in their communities.

CAWST's Youth Wavemakers is a unique water education program that engages youth, encourages action and celebrates the impact that youth are having on local and global water and issues. CAWST does this by providing resources such as lesson plans, games, action planning tools and action grants. CAWST also provides professional development workshops for teachers who want to learn how to integrate global and local water issues into their curriculum.

Youth from 23 teams and 16 different schools across the Calgary area, Siksika, Edmonton and Winnipeg took part in activities exemplifying the scope of water issues globally, while highlighting the



importance of awareness locally. This year, once again, former Wavemakers were selected to emcee the event.

The students participated in an array of activities that challenged their perceptions about water issues. Through CAWST's Global Village Mystery activity, youth took on roles as international aid workers identifying the sources of illness in a simulated rural village. Students interviewed villagers and learned of the complexity of issues faced by

residents when dealing with water and health-related issues.

Echoing the issues faced in developing countries, students were shown the trailer of CAWST's newest educational resource, launched at the Global Justice Film Festival, in Winnipeg, on November 2, called *Food of Change*. The documentary highlighted the capacity of youth to inspire action and overcome the challenges in water-related issues facing developing countries.

The Youth Summit then introduced young filmmaker Trevor Solway and showcased his film *Siksika Strong*. Trevor, a self-proclaimed storyteller, detailed his experience documenting the June 2013 floods in Siksika, east of Calgary, and engaged students in an enlightening question-and-answer period. His journey to document the flood and its after-effects and the governmental and nongovernmental response, using the authentic testimonies, hit an emotional chord with the entire audience. Participants learned first-hand the true meaning of taking action and making it count.

Michelle Mueller, public program coordinator—water resources, Calgary, spoke about a wide range of relevant municipal issues including storm water management, resource stewardship, population growth and other stressors on water resources, the flood response and proactive measures taken by the city, protecting drinking water, preventing contamination, and preserving public health.

Students had the opportunity to expand their awareness of local water issues by meeting with

10 organizations that educate youth about the actions they take to solve the challenges surrounding them. Issues and actions included raising awareness to prevent invasive species from inhabiting Alberta wetlands and making consumer choices to promote eco-friendly products. It became apparent to all students that in order to create sustainable change, both globally and locally, a comprehensive and collaborative effort is essential alongside a deep understanding of the complexities surrounding water in our communities.

CAWST staff plays a crucial role in challenging previously held notions about youth action. The international technical advisor to Zambia and Ethiopia, Tal Woolsey, explained the six different action types that lead to sustainable action. These actions include

- education and information,
- global cooperation,
- organization and influence,
- hands-on approach,
- lifestyle choices and
- consumer action.

Through this lens of the six action types, students developed

the foundations of their water action projects to be submitted to CAWST Youth Wavemakers. Committed to making change locally and globally, these students will carry out their inspiring projects and engage their peers throughout the academic year. The support from CAWST includes a \$500 action grant and training and consulting support throughout and beyond the process.

All projects will be celebrated at CAWST's World Water Day Celebration to be held at the Devonian Gardens, in Calgary, on March 18, 2014, to coincide with the UN World Water Day. Together these youth leaders will have engaged their peers and members of their communities with water-related actions, creating a ripple effect that since 2005 has affected nearly 80,000 people.

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*Natasha Sarkar has been working in education and youth-oriented programs since 1996. She has a keen interest in global citizenship, water and sustainability, and brings strong skills, knowledge and experience to the position.*

# Green School—Preparing the Soil

Antonella Bell

*It is not half so important to know as to feel ... if facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow.*

—Rachel Carson

*“The faint call of the birds rings through my mind, the ruffle of leaves left behind, the clouds that cover the beautiful sky, are all connected in a way to find.”*

It always surprises me how even those active Grade 5 boys enjoy quiet moments of stillness and solitude when we stop at some point in our day to do some journalling. It might be along the edge of the pond after “frogging;” or in the Secret Garden, a perennial favourite of Green School students; or on the boardwalk in the larch fen where, in the fall, soft, golden needles gently shower those who are seated beneath them.

One of my favourite parts of Green School is seeing the children spread out in the woods or around

the pond, busily writing or drawing in their nature journal or simply being quiet, taking in the moment. This is the kind of time many children no longer get. Children need to be allowed and encouraged to slow down and to see with all their senses the beauty and complexity of the natural world. It is moments like these that are key to developing a foundation of love and respect for it.

In creating Green School, I based the program on research I had done for my master’s thesis and on the model developed in Calgary by

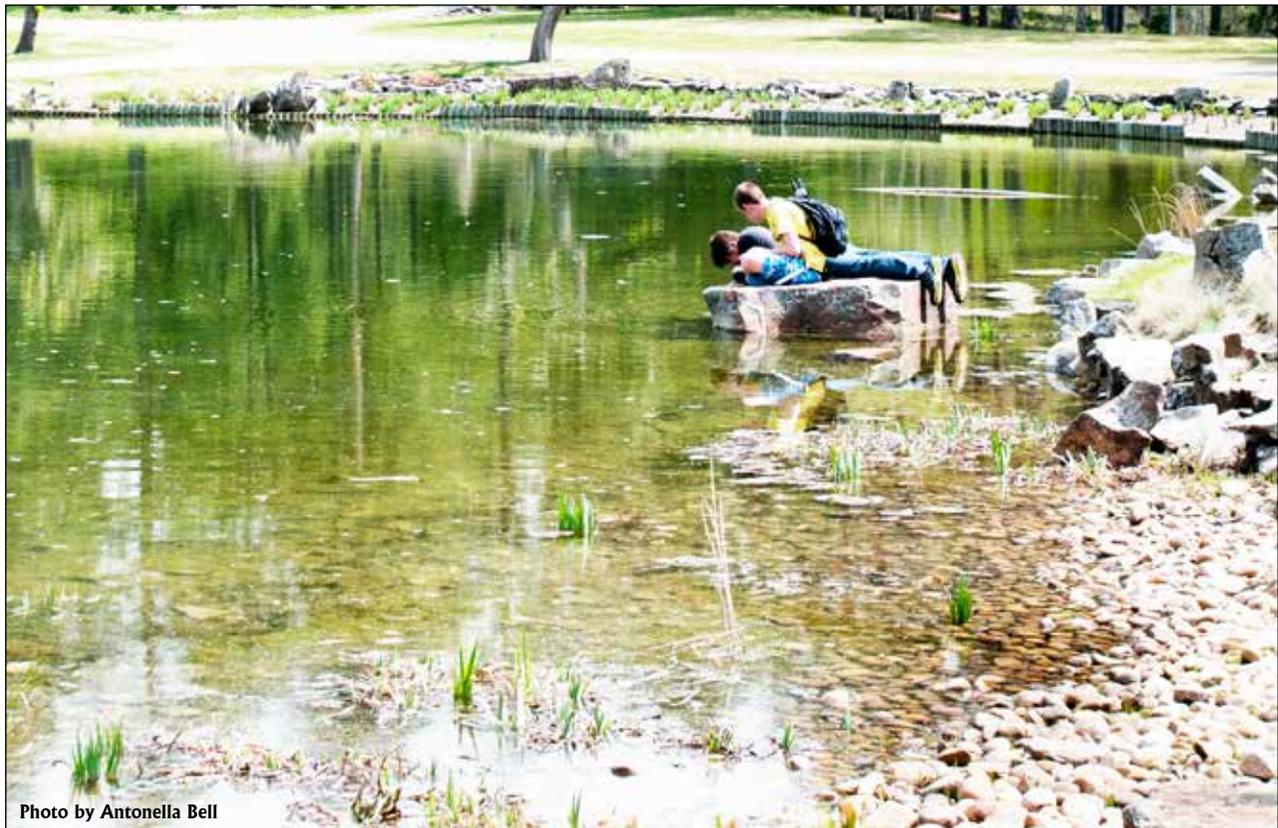


Photo by Antonella Bell

*"I just realized how some people have eyes and don't use them. They have ears but don't use them. Nature opens you and makes you realize how lucky we are."*

Gillian Kydd, now known as the Open Minds Program. Kydd, an exceptional educator and one of my mentors, believed that field trips were a rich source of valuable learning for children, but because of the time limitations and prescribed agendas in traditional outings, the learning usually ended up being superficial. She proposed and piloted the first week-long site school at the Calgary Zoo; the school has been running successfully since 1993. Five consecutive days at a site in the community encourages learning at a depth that would not otherwise be possible.

The extended time frame of these programs worked well in facilitating one of my main goals for Green

*"I have never seen so many trees all in one place!"*

School, which is having children feel more at home in the natural world. If children are ever to feel a sense of attachment and belonging to the natural environment, it is vitally important that they feel comfortable there. Having students for a week helped to familiarize them with this often-unknown world. Deb Greiner, Green School coordinator, agrees, "The five days is very significant. This is where the magic is." Numerous children got over their fear of bugs during the week. This may seem like a small thing, but actually is a significant shift in attitude that leads to greater comfort in the natural environment. Other students, who would not even sit on the grass on Monday, were often knee-deep in mud as they looked for elusive frogs by Wednesday. As one teacher put it, "To really just be a kid and get dirty is something a lot of them could not

comprehend at first but excelled in at the end!"

Another favourite part of running Green School was seeing the transformations that occurred in some children during the week. My most memorable such event involved a Grade 5 boy who had already been expelled from three schools in his short academic career. He had a file an inch thick because of behaviour problems. At Green School, however, he was always right behind me on our walks, filled his journal pages and behaved appropriately all week. For some reason, this little boy had an affinity for insects, and they seemed to be attracted to him, including a cricket that sat on his hand for our entire three-kilometre hike one day. As the week progressed he became known as the bug whisperer, and his fellow students started treating him differently. They no longer shunned him and instead developed a new respect for him. For this boy, his week of Green School was definitely a pivotal moment in his life. As the pressures associated with the constraints of the traditional classroom are relieved, these weeks often allow the teacher and students to see each other in a completely different light, leading at times to richer relationships.

Although aspects of the science curriculum are certainly covered, especially if the occasion presents itself, Green School is largely a go-with-the-flow program. The relatively unstructured nature of this program can be challenging for many teachers—initially even for Greiner. "I am not the same teacher that I was two years ago," says



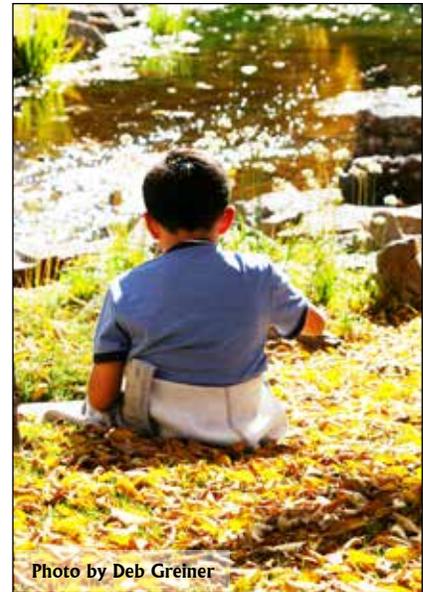
*“When we are in and around nature, it’s like a strange mystical veil has been sent over us.”*

Greiner. “I had to let go of the structure. But because I have seen so many times the changes in kids, I trust it. This is real learning, but it is not really measureable.” Lee Foote, director of the Devonian Botanic Garden, professor in Renewable Resources at the University of Alberta, and regular guest teacher at Green School, says that, “The downtime, the unstructured time, is the most formative part. It allows the kids to get into a flow, a rhythm of a different style of learning that is somewhere between recess and a classroom. It has the best of both, and a lot of them just blossom in that environment. They feel safe, they feel engaged and they feel the tacit approval of the leaders and their teachers. It is an enforced freedom. It takes a day or two before they get the grip on this, but it makes learning fun and meaningful.” However, although Green School is largely an unstructured program, all aspects of the curriculum are covered in a very informal way. As one teacher said of her experience, “This was not only a week about forests and trees but also a week of writing, religion, health, gym, math, art and wonder.”

*“The sun’s light reflecting off the tamarack needles, forming a soft golden blanket on the grass. I could just curl up and go to sleep. It’s moments like these that make me want to be in nature for the rest of my life.”*

During the week, there are a number of guest presenters, which is also an integral part of the experience. When people speak of their passion, whether that is owls, insects, wetlands or mosses, their enthusiasm is contagious. As bryologist Rene Belland (aka Moss Man) says, “It gave me the opportunity to share my passion for mosses with students, many of whom had no prior experience with this group of plants. So, from that point of view, Green School has given many students the opportunity to learn from experts about our living environment and to absorb some, even a minute amount, of the passion that those experts have for the organisms they study about so diligently and with so much love. To me, even that little amount of passion absorbed by a child is a primordial seed that can grow and gives us hope that this coming generation will care for our planet more than the current or prior generations.”

Green School is successful due to the support, both financial and other, of many individuals and organizations, and it was gratifying to see Green School recognized with an Emerald Award this year. It is my hope that these weeks will continue to provide opportunities for connections that will later flourish into feelings of love, respect and belonging to the natural world. An increasing number of studies have shown that many of the challenges that our children face



these days can be directly linked to them not spending enough time outside. It would be wonderful if in the near future, programs such as Green School would be widely available to all classes. Until then, I hope that teachers will begin to understand the value and importance of taking students outside in an informal way on a regular basis.

Green School was awarded an Emerald Award in conjunction with the Kids in the Garden programs at the Devonian Botanic Garden. For more information on both of these programs, please visit their website at [www.devonian.ualberta.ca](http://www.devonian.ualberta.ca). Applications for the 2014/15 year are due by April 25.

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*Antonella Bell is a doctoral student in the Faculty of Education at the University of Alberta. Her interest is environmental education, and her area of research is exploring ways to help teachers develop a caring and respectful relationship between their students and the natural world.*

# Education for the Environment

Bonnie Shapiro

The first offering of a new graduate level program, titled Education for the Environment, is currently under way at the University of Calgary's Werklund School of Education. This course of study is one of a number of new programs in the school's new MEd cohort-based interdisciplinary approach to graduate work. The four-course program, to be completed in one year, is delivered primarily in a face-to-face format with online and off-campus components. It is designed to help participants build experiential and foundational depth in environmental education. Four courses comprise the program: (1) Foundations of Education for the Environment; (2) Frameworks for Environmental Education, Interpretation and Communication; (3) The Human Relationship with Nature; and (4) Teaching and Learning for the Environment. Instructors in the program are program coordinator Bonnie Shapiro (Werklund School of Education professor), Mike Mappin (education coordinator, U of C Biogeosciences Centre), Susan Barker (U of C vice-provost, Student Experience) and Ugur Parlar (Werklund School of Education doctoral student). Course requirements and descriptions can be found on the Werklund School of Education Graduate Programs website at

<http://werklund.ucalgary.ca/gpe/content/education-environment>.

Through a place-based approach, participants have been discovering the power of theorizing in such environmental settings as the U of C Biogeosciences Research Station; at such local projects as the Whispering Woods Natureground project, adjacent to Dr E W Coffin School; and engagement with structures that teach, such as the City of Calgary Ralph Klein Legacy Park facility. Topics such as ecological identity formation, environmental ethics, the human/nature relationship and frameworks of environmental interpretation are studied through a broad range of disciplines including philosophy, literature, physics, semiotics and architecture. In addition to engagement in foundational readings and discussions, and place-based experiences, students also regularly meet and converse with members of Alberta's large population of dedicated and dynamic leaders in environmental education to help build synergy, community and connections within the field.

Students from a wide range of backgrounds and levels of expertise are participating in our program. It has attracted novice and experienced environmental educators who work and study in a wide variety of settings. Many classroom teachers populate the

program, but students may also be environmental educators working in informal settings, or whose work involves them in administration and development of government and nongovernment agencies and parks. A student is eligible to apply to enter the program with any relevant previous four-year bachelor degree. A degree in education is not a required prerequisite. Environmental educators work and teach in formal classroom settings and universities, but also administer and develop curriculum for government and nongovernment agencies.

The goal of our program is to help develop knowledgeable and skilful leaders who will contribute to the development of an educated public and who can make wise decisions regarding the current crises in our relationship with the environment. Informed decisions impact and benefit society, promote environmental health, address social justice issues and contribute to general societal well-being. The course builds community and adds valuable depth to the population of educators needed to build new knowledge and awareness of the many issues and resources available to support work in the field. In their capstone course, in spring of 2014, participants will apply their knowledge in the development of a project to affect their own specific work, programs or interests.

... Articles ...

As with all offerings in the MEd Interdisciplinary program, students receive a certificate upon completion of the set of four courses as a formal recognition of their newly acquired expertise. If they wish to continue, a second set of four courses is available in one of the 26 other topic offerings listed on the graduate programs website: <http://werklund.ucalgary.ca/gpe/interdisciplinary-med>. Upcoming 2014 program offerings, which may

be related to environmental education interests, include outdoor education; creativity in educational practice; storytelling and the ecological heart of curriculum; and self-realization, sustainability and well-being. These programs may be used toward a diploma or an Interdisciplinary MEd degree if combined with other courses.

To learn more about the program Education for the Environment or U of C Faculty of Education MEd

Interdisciplinary offerings, or to register for programs, please visit [www.ucalgary.ca/gpe/interdisciplinary-med](http://www.ucalgary.ca/gpe/interdisciplinary-med).

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*Bonnie Shapiro is academic coordinator of the Education for the Environment Multidisciplinary MEd program offered by the Werklund School of Education. She is a professor in the Werklund School of Education and teaches and conducts research in science and environmental education and teacher education.*

# Silence in the Park

Kevin Van Tighem

Wading a cold river in the rain was not how I wanted to start day three of a nine-day wilderness trip in Banff National Park, but there was no alternative. Since my last visit, 35 years earlier, Parks Canada had demolished the bridge across the Panther River and closed down the fire road.

When I first hiked the Cascade Trail, in 1976, it was a good gravel road all the way from Bankhead,

near Lake Minnewanka, to the Red Deer River. Park wardens and horse wranglers regularly drove its 80 kilometres between the town of Banff and the Ya Ha Tinda Ranch east of the park. They still used the Spray and Brewster fire roads, too. Years earlier, in fact, the road sometimes opened for public use; my grandfather used to drive in to fish lakes that are now a two-day hike from the trailhead.

Thirty-five years after my first visit, however, the road was grown in with willows, ryegrass and dryas. Mine were the first human footprints this year on what had become a seldom-used single-track trail. Yesterday I had waded Cuthead and Wigmore Creeks several times, growing increasingly nostalgic for culverts, and today—June 26, 2011—I had my first major river to ford.



“Divide Creek is just one of the places where young fir trees are taking over what were open meadows only 35 years ago. Once-grassy meadows are being crowded by expanding willow and dwarf birch thickets. Increased CO<sub>2</sub> is giving woody shrubs a growth advantage.”

Icy water tugged urgently at my knees as I picked a downstream route across a gravelly riffle. I emerged safely, feet aching, into a tangle of rain-dripping willows. Upslope from the willows the vegetation opened into a burned-off pine forest with lush tussocks of rough fescue—Alberta's provincial grass—and clumps of healthy young aspens.

Sitting on a fallen log to trade wet runners for dry footwear, I reflected on how much had changed since my last visit here. That first hike was at the start of my career with Parks Canada; this one was at the end. In the late 1970s I was a Canadian Wildlife Service (CWS) biologist working on the original wildlife inventories of the mountain national parks. A third of a century later I retired as superintendent of Banff, Canada's oldest, most revered and most controversial national park.

On that first solo foray along this route I saw no rough fescue and no young aspens. Heavy, sustained grazing by the elk that overpopulated the park in the 1970s repeatedly killed young aspen sprouts and suppressed the most palatable grass species. Never having known a Banff that wasn't defined by grazed-down meadows, aging aspens black with scars as high as an elk could reach, and fire roads extending back into nearly every valley, however, nothing about that trip seemed unnatural to me. It was the Banff I knew.

Some years later, I helped biologist Geoff Holroyd compile final reports on what our CWS study teams had learned through many months of measuring and counting just about anything that moved anywhere in Banff and Jasper

National Parks. The ecological land classification of which our wildlife inventory was part was the most exhaustive study of ecological conditions ever in the mountain parks. By its conclusion, I had learned that lovely scenery can conceal a lot of ecological problems.

The sad state of the park's aspen groves, willow thickets and fescue grasslands by the early 1980s was partly the result of too many elk and partly the result of too little fire. The too-many-elk part of the problem resulted from too few predators, especially wolves. They were then only beginning to recolonize the southern Rockies after having been poisoned and shot out during the 1950s and 1960s. Bears, too, can be important predators on elk calves. Bear studies by Stephen Herrero, David Hamer and Mike Gibeau, however, showed that the park's many roads and poorly located trails were displacing grizzly and black bears from their most productive habitats and exposing them to increased risk of conflicts with people and collisions with vehicles and trains.

The too-little-fire part of the problem had a lot to do with the determination with which Parks Canada and neighbouring agencies fought back whenever fires flared up after lightning storms or human mishaps. Fire is among the most important agents of ecosystem renewal in western Canada. Lodgepole pine, aspen, rough fescue and countless other species rely on wildfires to put potassium back into the soil, open up the vegetation canopy, knock back competing plants and produce ideal conditions for regeneration. But, by

the 1980s, fire had become almost a stranger to the forests and grasslands it had helped sustain for millennia. The Cascade Trail I was following, in fact, was originally a fire road built so crews could quickly extinguish backcountry blazes.

As I set off up Snow Creek along the former fire road on this June morning I was surrounded by the blackened spars of dead lodgepole pines. Parks Canada's fire crews had not fought these fires—on the contrary, they had ignited them. Since the late 1980s Banff's fire specialists have been at the leading edge of using prescribed fire to restore ecosystem health.

As an ecologist, I was gratified to see the results—a patchwork of hillside grasslands, aspen woodland, patches of unburned pine forest and lush shrubbery where three-and-a-half decades earlier I had hiked through a monotony of pine trees. As a hiker, however, it proved a bit disconcerting. A short way up the trail, I rounded a bend to see a grizzly bear eating sweetvetch roots 60 metres away. A quick glance around confirmed that, should events demand that I climb a tree today, I'd be out of luck. They had all been burned through.

The bear, however, fled the moment he spotted me. I don't know how many human beings he had seen in his life, but I was almost certainly the first one he met in 2011.

During the first eight days of this wilderness pilgrimage the only sign of humans that I saw was a single horse track. And yet, I knew the park was crowded with people. More than three million visitors flock to Banff each year. There were major special events scheduled for

the area near the town of Banff during the time of my hike, and the campgrounds were full. Yet mine were the only tracks amid this mountain beauty. It seemed strange.

A long walk in the lonely wilds is a good opportunity for contemplation. Reflection has a particular edge and poignancy when it comes at the end of one's career. What, if anything, had Parks Canada gotten right during my time with it? Several days later, when I finally arrived at Lake Louise, I had concluded that we had managed to get a lot of things right.

Banff is in a wilder and more natural state today than when I first discovered it. Wilder, because fire roads like the Cascade have been closed to motor vehicles and turned back into trails, while at the same time unnecessary facilities and fences were being pulled out of front-country valleys to remove obstacles to wildlife movement. More natural, in part, because fire and wolves are back. The ecosystem has responded with fewer elk, more aspens and fescue and greater vegetation diversity. More natural, too, because bears no longer feed in garbage dumps, and while foraging for natural foods across the mountain landscape they are far less likely to die on the Trans-Canada Highway now that it has been fenced and fitted with crossing structures. Grizzlies die unnatural deaths today at less than half the rate they did in the early 1980s.

Clearly, the elements of Banff National Park's ecosystems that respond to park management decisions such as whether to close or fence roads, ignite prescribed fires, protect wolf dens or open up corridors of secure habitat for

sensitive species such as grizzlies, cougars and wolves had all improved. Challenges remain—like too-frequent deaths of bears from collisions with CP Rail trains and the spread of invasive plants and fish—but on the whole, today's Banff is in better shape than it was when I joined the organization that manages it.

I should have felt good, but I didn't.

Banff and Canada's other national parks face bigger challenges than Parks Canada can solve by itself. Global changes, resulting from the thousands of decisions people make daily across the continent, threaten to overwhelm even the best cared-for of park ecosystems.

I was painfully aware that Banff had recently seen the loss of its last caribou—the first large species extirpated since park establishment. I also knew that Alberta glaciers have shrunk more than 25 per cent in the past 35 years. But other changes I saw on my 2011 hike led me to suspect that global environmental changes are causing less obvious, but more pervasive, ecological damage throughout the park.

From its earliest days, flower-strewn timberline meadows have been among Banff National Park's defining elements. Up where forests end and the alpine emerges, generations of artists have been enthralled and hikers inspired by the beauty of timberline. Clumps of subalpine fir with gnarled old larches and whitebark pines frame impossibly lush openings full of glacier lilies, windflower, paintbrush and valerian. The first time I broke out into Banff's timberline country I felt like I had arrived in Middle Earth—it was hard to conceive of so much beauty set against such peaks.

Snow Creek summit was one such place. After 35 years I couldn't wait to see it again. To my dismay, however, its timberline meadows had almost vanished. Openings once full of greenery and wildflowers were now packed with dense young subalpine fir. Higher still, thousands of young trees dotted what before had been open alpine meadows. The late-lingering snows, frequent summer frosts and wet soils that used to keep the forest at bay can no longer be relied upon, at a time of rapid climate change.

Those high meadows, I soon realized, are filling with trees almost everywhere. A defining element of Banff National Park's unique mountain aesthetic—and a vital habitat for many kinds of wildlife—is shrinking as forests expand upslope. While these high-elevation meadows can be expected to migrate further uphill, they need soil, and soil develops very slowly on high mountainsides. Meanwhile, the meadows are increasingly squeezed between advancing forests below and rocky, soil-less ridges. A warming climate is quietly erasing Banff's timberline flower meadows.

Snow Creek summit also awakened me to another change I might have missed if I hadn't let so much time lapse between visits. Many of Banff National Park's higher valleys have a sort of male-pattern baldness. The sides of the valleys are forested, but the valley floors are open. The valley bottoms are unfriendly to trees because of their high soil moisture and frequent frosts from the cold air pooling there at night. Streams in these valleys meander through mosaics of

grassland, dwarf birch tangles and willow thickets.

Columbian ground squirrels live in the grassy areas and are an important food source for predators such as golden eagles and coyotes. Brewer's and white-crowned sparrows thrive in the patchy habitats. Moose, elk, grizzly bears and, until recently, caribou rely on the lush meadow forage.

Upper Snow Creek had those sorts of meadows a third of a century ago. Today, however, the grassy parts are harder to find. The dwarf birch and willows are taller, and have filled in most of the open spaces. Charred stems show where park fire crews have tried to burn the shrubbery back, but to no avail.

Researchers recently learned that increased carbon dioxide levels in the air give some woody shrubs a growth advantage over grasses and forbs. If that's what is happening along Snow Creek and the other subalpine stream meadows in Banff National Park, or even if the causes are as simple as warming soils or changing snowpacks, then it would represent another loss of ecological diversity traceable back to pervasive atmospheric changes.

These sorts of changes may have contributed to the disappearance of

Banff's woodland caribou. Never abundant after Alberta built forestry roads that fragmented their habitat outside the park and improved access for poachers, the Banff part of the herd dropped from 20 or so in the latter part of the 20th century to only five in 2009. All five died that winter in an avalanche. Biologists, however, suspect that wolf predation may have brought their numbers so critically low in the first place.

Caribou avoid predators by staying in remote areas where the snow gets deep. Frequent hard winters used to kill off deer and restrict elk to windy winter ranges east of the caribou. Today's gentle winters enable more deer and elk to survive, in turn supporting higher numbers of wolves than would have been normal in the past. That need not be a problem for caribou, which winter in high valleys whose deep snow used to discourage wolves. The increased frequency of mild winters, unfortunately, means that wolves can now travel much more widely thanks to a shallower, denser snow pack. Even before that final accident, climate change had probably already doomed Banff's caribou.

On my original 1976 hike I had hoped to see a caribou. This time I knew I wouldn't.

Perhaps most troubling, however, was the stillness. Mountain songbirds are at their most vocal in late June. But day after day I hiked through a sodden stillness broken only occasionally by the song of a kinglet, Brewer's sparrow, hermit thrush or robin. Olive-sided flycatchers were common in the recently burned forests, but some species were completely missing. The barn swallows that once nested under the eaves of every patrol cabin were gone. The businesslike chant of MacGillivray's warbler was nowhere to be heard.

I contacted Geoff Holroyd at the CWS when I got back. He confirmed that counts of many migratory songbird species are down across most of the continent. Even in protected places such as Banff National Park their numbers are down, but it's because of things happening elsewhere. Many die during their night-time migrations when they get trapped in the lights with which cities, casinos and airports fill the skies. Some are killed by pet cats or collisions with windows. Others can no longer find resting or feeding spots now eliminated by urban sprawl, agricultural intensification or development. Pollutants affect their health and reproductive success.



"Prescribed burning and road closures have restored habitat for wary animals, such as this grizzly digging roots on a former fire road. But challenges remain, such as collisions with trains."

Climate changes add to the stress of migration by exposing birds to unexpected weather and altered habitats.

For all the continuing improvements in Parks Canada's ecosystem management, Banff National Park's timberline meadows are shrinking, its subalpine grasslands are being overwhelmed with woody shrubs and the changing landscape is going increasingly silent. And nobody seems to be noticing.

That the causes lie almost entirely outside the park doesn't, however, get Parks Canada off the hook. Canada's national parks are dedicated to the people of Canada for their benefit, enjoyment and education, subject to the requirement to keep them unimpaired for future generations.

The enjoyment part is no problem; millions of Canadians go home happy from the parks each year. But the education part requires that they also go home with new insights or understanding about how ecosystems work and how their daily choices affect the earth's atmosphere and ecosystems for better or worse. Without that, it's unclear how Canada, or Canadians, gets lasting benefits from those visits. Nor, for that matter, how the parks themselves can benefit—since the global forces threatening to impair those parks are the cumulative effect of decisions made by those same visitors, and their neighbours, at home.

It's at home, not during our brief visits to national parks, that we Canadians leave lights on in high-rise buildings, putting more carbon dioxide into the air from the wasted

energy while dooming migrating songbirds to death by exhaustion in urban light traps. It's at home where we choose whether to buy gas-guzzlers or fuel-efficient cars. It's between park visits when we decide between rapid and reckless development of tar sands or more frugal approaches to the exploitation of our boreal forests and the petroleum beneath them. Our most important decisions as consumers, and as voting citizens, are made during day-to-day life.

National parks exist at the will of Canadians—they give expression to our collective sense that nature matters, that our heritage gives us meaning, that some places are so special that they should be passed on like family heirlooms to those who come after us. But they also exist at the mercy of Canadians.

During my 35 years working in western Canada's national parks, the number of visitors to those parks more than doubled. Some environmental groups argue that's a bad thing; some tourism groups think it's great. It could be either. It all depends on what new insights, understanding and motivations those visitors took home with them. Parks Canada's core mandate says that visitors are to be educated. And if parks are threatened with impairment, then Parks Canada is mandated to avert it. Those two responsibilities are flip sides of the same coin, because the only hope for wise decisions about land use, energy consumption and climate policy is an educated, ecologically literate Canadian population.

It is Canada Day, 2011, when I finally arrive at the Trans-Canada Highway near Lake Louise.

Countless people are streaming through the scenery, many on their way to or from celebrations of this place we call Canada—a place whose nature we honour and purport to protect in places called national parks. None, I suspect, are aware of the silence in the woods, the shrinking meadows, the missing caribou. Most will go home feeling good about their national park. Far too few, I fear, will go home transformed or enlightened about the nature of their Canada, its ecosystems, its climate—and their choices as citizens.

It appears that, for the most part, Parks Canada got ecosystem management right by the end of its first century. The critical next challenge is ecological literacy. Our parks won't last their next century without it.

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*Kevin Van Tighem retired as superintendent of Banff National Park in 2011 after 34 years working in Canada's national parks. His western roots run deep: his family has been in what is now Alberta since 1875. Since graduating from the U of C with a BSc in ecology, Van Tighem has studied and interpreted wildlife and their habitats in various parks and protected areas. He has been an active member of several conservation organizations and played a lead role in regional conservation initiatives, including two major river conferences in Alberta. He has written 11 books and more than 200 stories and essays on nature and conservation. He lives in Canmore.*

*Reprinted with permission from Alberta Views Magazine, Volume 15, Number 6, July/August 2012. Minor changes have been made to conform to ATA style.*

# ***FUTURE***

## **Looking Forward—Envisioning Future Scenarios in Classrooms**

Monica Chalal

For me the future of education revolves around Hip-Hop-Based Education (HHBE). For many, HHBE would be inappropriate in a classroom setting, but, in fact, it's the opposite. Students are already connected to hip hop. It is the largest and most far-reaching youth culture in the world. So my question to you is simple: Why not connect the culture of hip hop to our classrooms?

When you think of hip hop perhaps you think of music, fashion or dance, but at its foundation hip hop is deeper than that. In North America hip hop was born from the streets of New York City during the civil rights movement when many were denied basic rights and when youth felt both unheard and voiceless. Hip hop emerged as a means for youth to vocalize their feelings. What was distinctive is that this vocalization took many forms: pictorially (graffiti), physically (dance), linguistically (emceeing) or musically (disc jockeys and turntables). Hip hop is about disenfranchisement, enabling those who feel powerless to find a means to vocalize their thoughts. From this



movement hip hop has four foundational aspects: graffiti, music, emceeing and dance. However, many current artists, writers, educators and researchers would argue that there is now a fifth foundation: a sense of self. Is a sense of self not integral to education today?

As a teaching style HHBE takes these five foundations and integrates them completely into the

classroom. HHBE is about communicating the culture of community that is essential to hip hop as well as the aspect of hip hop that appreciates diversity and difference, and provides space for contemplation and expression. HHBE is a teaching style used worldwide. It breaks barriers of class, culture and language, and because of the many facets of hip

hop all youth can find an aspect that appeals to them.

However this is not the main reason to advocate HHBE. The most important reason is that youth today are similar to the youth of the past. Many feel invisible, voiceless, disengaged and disenfranchised. As we head into the future, we must not

leave these students behind. HHBE is about creating a culture and environment in the classroom that includes all students by connecting with what interests them. HHBE begins on the first day, and by creating a space within schools that is based on HHBE and that allows for individuality and ultimately

greater engagement, true learning can occur.

If you still have reservations about HHBE, let me answer some of the misgivings you may have.

Finally, I leave you with a comment from a member of my Hip Hop Pedagogy course.

This class has given me a very different perspective of the classroom, and for that I am very grateful. I will be able to connect with my students on a deeper level, and even more important, I will be able to get students engaged in what I am teaching. So really I am the winner. (Samual Fix, University of Alberta preservice teacher)

If the United Nations understands the importance of hip hop in today's world, why are educators oblivious? Every day students learn from hip hop, so why not bring hip hop into the formal learning environment?

Note: For a great introduction to the power of HHBE, please watch Christopher Emdin's Ted Talk: <http://www.youtube.com/watch?v=GYpcqntL800>.

Misgiving	My Response
HHBE is about rap music.	No, HHBE has many different aspects and foundations; it is not only about the gangster rap that plagues our airwaves.
HHBE brings questionable content into the classroom; or HHBE is always empowering and progressive.	No, like all things we bring into our classrooms, HHBE requires a careful accompanying pedagogy.
Hip hop is a North American thing.	No, hip hop is truly global—if there is a country there is an accompanying artist.
Hip hop is only in English.	No, as a global phenomenon hip hop is present in hundreds of different languages. Within Canada there are many FNMI artists who emcee in languages other than English, such as Cree.
Hip hop is apolitical.	No. At its inception hip hop was inherently political. Today, in many countries where freedom of expression is nullified, graffiti is used as means to convey messages that are otherwise deemed illegal, hence many graffiti artists are called graffiti writers. Emcees are also political; see, for example, Plex's video and song highlighting the Idle No More campaign, <a href="http://www.youtube.com/watch?v=u9FXdVnweok">www.youtube.com/watch?v=u9FXdVnweok</a> .
Hip hop is patriarchal.	No, some of the biggest global hip hop artists are female (Shadia Mansour); as well, many male hip hop artists lend their voices to issues specifically affecting women. For example, the male group DAM was asked by the United Nations to raise awareness of honour killings (see <a href="http://bit.ly/1dxPBmp">bit.ly/1dxPBmp</a> ).

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# Inner Climate Change

Kim Wallace

*In our world everybody thinks of changing humanity, and nobody thinks of changing himself.*

—Leo Tolstoy,  
*Some Social Remedies*

Recently, for my master's thesis research on environmental education and communication, I investigated the intimate connection between the condition of the inner and outer environments of one's being. More specifically, I studied how an exploration of one's inner world can influence responses that occur in the outer world. The study, which I conducted jointly with a small circle of seven educators, involved an examination of our held assumptions and beliefs, a daily practice of mindfulness, and a cultivation of beliefs of belonging. My findings suggest that the practices we adopted are helpful, often overlooked, tools that can assist us to work toward healthy ecosystems from the inside out.

Unhappiness is polluting not only our own inner being and those around us but also the collective human psyche of which we are an inseparable part. The pollution of the planet is only an outward reflection of an inner psychic pollution (Tolle 1999, 67).

As an environmental educator and communicator, I am curious about the various influences of and barriers to the messages I send and

receive, especially those regarding the fundamental place of humans in the world. It seems that communication, an essential component of the experiences we have of the world, is filtered through the assumptions and beliefs we hold. Our experiences then influence our relationships with self and others, both human and other-than-human.

As a point of clarification, I understand an assumption to be a proposition that is frequently "unchallenged, unquestioned, unexamined, and very often untrue" (Beaumont 2009), while a belief follows deep consideration for and an investigation of multiple perspectives. A belief can be false, however, and evolving circumstances may alter the relevance of a belief.

Assumptions are often formed and adopted without conscious awareness. They may arise following an experience or be taught to us by family, culture or media. Assumptions seem to thrive when we take our ability for conscious and intentional reflection for granted and simply accept the stories we hear or experience them as the truth. However, when we learn to habitually question and explore underlying assumptions and beliefs that significantly influence our perceptions and behaviour, we may find ourselves in a strategic position to create intentional and

lasting change. Our ability to respond, rather than react, to the world is strengthened through this questioning. Our capacity to respond, especially in moments of novelty or discomfort, is additionally enhanced through a practice of mindfulness and a cultivation of beliefs of belonging.

The study idea arose out of a personal crisis I experienced while I was teaching in the public system in rural Alberta. At the time, I was wondering deeply about how to maintain my health in what I experienced to be an unhealthy system. After investing much time and energy in efforts for a sustainable and just planet, I began to question my own actions and how sustainable and just they were toward my values. I also wondered about the underlying assumptions and beliefs that drive my efforts, as well as the efforts of my colleagues, especially those in the field of environmental education and communication. For example, do the Earth and its other creatures need or want our help? Within complex, living systems, how can I know when my actions are the most appropriate? Who do I become in relation to those I attempt to assist and those whose behaviours I attempt to alter? What do I endeavour to gain or avoid through my efforts, and what are my motivations for change? I began to

question if the discomfort I attempt to move away from through my change efforts belongs to others or if it was, in fact, my own.

Perhaps most mystifying to me is why, despite my efforts to work for the health of the external environment, I know so little about and do so little to care for my inner space. While I have worked to reduce my behaviours that have a physical impact on the planet's ecosystems, why is it that I often overlook my own ecosystem, the balance of my mental, emotional, spiritual and physical health? If Tolle's claim above is correct, then our inner climate, including our assumptions and beliefs, influences our work and interactions with the outer world. This inner space is as important—if not more so for its ability to colour our experiences—as the other issues we typically address in the field of environmental education.

Increasingly intrigued by how my inner and outer environments intricately influence one another, I became interested in the health of my inner climate. I grew curious to investigate what it is to pay attention, not just to the visible

realm of my actions but also to what Scharmer (2009, 7) calls the “blind spot ... the inner place from which [I] operate.” By tending to and balancing my inner climate, is it feasible that I might also influence the external climate in which I live?

My inquiry was, and still is, rooted in a curiosity about how we, as conscious and self-aware humans, might increase our capacity for creative decision making, especially during times of change and instability. At this time in humanity's evolution, when the planet's species are faced with circumstances as life altering as global climate change, I sense we would benefit from the illumination and unpacking of the default assumptions and beliefs that influence our behaviours in the world.

Stressors, especially those that appear life threatening, often trigger a fight, flight or freeze reaction. Though we most often rely on repeating what has worked for us in the past, living systems evolve so that reactions based on previous circumstances are not always relevant, or effective, in the present. I propose that by working with the climate of our inner landscape, we

can cultivate our ability to respond rather than react to environmental triggers. In doing so, we are better positioned to change our external behaviour and relationships, and thus influence environmental conditions. Conversely, if we don't address interiority, any attempts to change the outer world may fail or certainly be less effective.

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# Currents of Environmentalism

Michael Kohlman

In the case of Alberta's oil sands, we have a perfect storm of powerful corporate interests, government bodies, workers and employers versus rather marginalized Aboriginal peoples and diverse, scattered environmental groups. Large multinational corporations, the dynastic provincial government and even the dominant Alberta culture treat development, resource exploitation and international investment as our inherent destiny—part of the Alberta Advantage. Political groups that defend this remote, sensitive wilderness region, which includes the isolated pockets of traditional Aboriginal cultures that are especially vulnerable to the rapid pace and expanding scale of development, are relatively weak, disjointed or even conflicted. In a province with a long trajectory of expanding resource exploitation, can commonly espoused notions of democracy, wilderness protection and preserving traditional Aboriginal ways withstand the onslaught of increasing industrial development and multinational investment priorities? Can disparate environmentalists preserve wilderness areas, protect vulnerable communities and help to reduce the global environmental degradation?

Martinez-Alier (2002, 1) identifies and describes three main "currents of environmentalism."

The first she labels "the cult of wilderness," perhaps best exemplified by John Muir and the Sierra Club, who act to fight a rearguard action, in order to save the remnants of wilderness from human development and industrial exploitation. This current is also variously known as wilderness environmentalism, preservationism or deep ecology (the movement inspired by Aldo Leopold). One could include many other modern environmental interest groups in this camp, such as the World Wildlife Fund (WWF), Wilderness Watch, Nature Conservancy or the International Union for the Conservation of Nature (IUCN).

Martinez-Alier identifies conservation biology as providing the scientific support for this first current and hails the 1992 Biodiversity Convention and the *American Endangered Species Act* as being among its crowning political achievements. She primarily credits deeply held values, such as the "sacredness of Nature, and the love of beautiful landscapes, not material interests," as the heart of the movement (p 2).

Over the last 30 years the "cult of wilderness" has been represented at the activist level by the "deep ecology" movement which favours a "biocentric" attitude to nature, in opposition to an anthropocentric "shallow" attitude. The main

proposal coming out of this first current consists in keeping nature reserves, sometimes called national parks or something similar, free from human interference. (p 3)

Martinez-Alier's second current is the "gospel of eco-efficiency," which is not normally opposed to development, but more concerned with the wise and efficient use of natural resources or natural capital. It is concerned with the whole economy and supporting environment, "worried about the effects of economic growth not only upon pristine areas but also on the industrial, agricultural, and urban economy" (p 5). It has become the dominant model for resource use and decision making, often under the label of "sustainable development" (even when applied to nonrenewable resources), espoused by governments, corporations and by many academic disciplines. As Matinez-Alier (2002) explains:

Today, in the USA and even more in overpopulated Europe, where there is little pristine nature left, the "gospel of eco-efficiency" is socially and politically in command in the environmental debate. This current rests, scientifically, on environmental economics ... and on the new discipline of industrial ecology, which studies "industrial metabolism." Ecology thus becomes a managerial

science mopping up the ecological degradation after industrialization. Beyond its “greenwashing” properties, eco-efficiency describes a research programme of worldwide reliance on the energy and material throughout in the economy, and on the possibilities of “delinking” economic growth from its material base (p 6).

Martinez-Alier credits Gifford Pinchot with the origin of eco-efficiency in the United States. Pinchot was a European-trained forester, who became the first head of the USDA Forest Service in the late 19th century. She cites President Theodore Roosevelt (1858–1919) as the original high-level political champion in America.

The third current is what Martinez-Alier labels “the environmentalism of the poor.” It is alternatively known as popular environmentalism, the environmental justice movement, livelihood ecology and even liberation ecology. Political ecology and environmental sociology are the academic disciplines underpinning the movement. She traces its origin to the social-justice movement and liberation theology (from Paolo Friere), from which it emerged in the 1980s. It recognizes that Aboriginal and peasant groups in hinterland regions have usually co-evolved sustainably with nature, and their practices have actually ensured natural conservation and biological diversity. However, these groups, and their way of life, are actually more vulnerable to the effects of industrial capitalism and global environmental degradation.

The environmental justice movement has overt racial, class and gender overtones, with distinct urban, rural and hinterland varieties, and even splinter groups like eco-feminism. Some better known eco-justice groups include the Tree Hugger and Chipko movements, the Coalition Against Environmental Racism, Greenpeace and Amazon Watch. Martinez-Alier discusses the emergence of this new wave of environmentalism, out of the melding of dispersed local movements worldwide, from traditional Indigenous groups in the hinterlands, to the rural and urban poor, especially people of colour:

This third current is growing worldwide, emphasizing inevitable ecological distribution conflicts. As the scale of the economy increases more waste is produced, more natural systems are damaged, the rights of future generations are undermined, some groups of the present generation are deprived of access to environmental resources and services, and they endure a disproportionate amount of pollution. In the Third World, the blending of formal and informal science and practices, the idea of traditional environmental knowledge [TEK], characterizes the defense of the traditional agroecological peasantry and of indigenous groups, from whom there is much to learn. (p 12)

The environmental justice movement has also added a powerful term to the environmental lexicon and a new epithet in the ongoing sociopolitical debate: *environmental racism*. Westra

(2008) defines environmental racism

as racism practiced in and through the environment. It refers to environmental injustice whereby, for example, toxic and hazardous waste facilities are frequently located in or near poor non-white communities. This disparity has been institutionalized and has led to disregard for, and ultimately to ecological violence perpetrated against people and communities of colour. (p 148)

Most often, cases and conflicts brought to the courts by aboriginal people, are based on principles that involve traditional cultural and religious beliefs, yet they are treated—for the most part—simply as land deals.... It is sad to find that when deliberate misunderstanding and ‘willful blindness’ appear to govern the federal and provincial governments, as well as the courts, then the quest for justice does not fare well, even under international law. The clearest case in point is that of the Lubicon Cree from Alberta ... while the Lubicon live in squalor, billions of dollars in oil and gas, and forest resources have been extracted from Lubicon territory. (p 187)

## Intercurrent Critiques, Conflicts and Conversions

Although popular media reports often tend to lump all environmentalists into one camp, it is becoming increasingly apparent that

there are many competing factions, with radically different motivations, agendas and priorities. The situation is similar to the waves of feminism and the fracturing of that fledgling movement into disparate interest groups and academic discourses.

Martinez-Alier (2002) argues that these three disparate environmental worldviews are often not compatible with each other, in any real sense, even using the term *incommensurable*, although they may form temporary alliances of convenience. This disconnect is reminiscent of Thomas Kuhn's notion of the "incommensurability of rival scientific paradigms," and the word has also begun to appear elsewhere in the environmental literature (for example, Soskolne 2008).

Just as each environmental current has its own historical, geographical and sociopolitical roots, it should not be surprising that each current (and even subcurrents) is developing into multiple streams that converge and diverge, sometimes cooperating and sometimes conflicting. Maturing environmental groups may incorporate new interests and emphases, and may, for instance, migrate from a wilderness preservation focus to an environmental justice mandate. Similar-minded local groups may join national or global umbrella groups to extend their influence and effectiveness. Others may splinter into separate factions.

## Criticizing the Cult of Wilderness

The cult of wilderness has long been the target of vociferous attack

from all quarters, including from other currents of the environmental movement. In *The Trouble with Wilderness*, William Cronon (1995) criticizes the modern wilderness environmental movement for having romantic idealizations of wilderness. Cronon claims "wilderness serves as the unexamined foundation on which so many of the quasi-religious values of modern environmentalism rest." The same essay offers a quote by African-American environmental justice advocate Robert Bullard, citing the same failure with engaging the urban poor:

Unless an environmental movement emerges that is capable of addressing these economic concerns, people of color and poor white workers are likely to end up siding with corporate managers in key conflicts concerning the environment. (p 176)

An even more stinging attack comes from Giovanna Di Chiro (1998) in her millennial environmental justice manifesto: *Environmental Justice from the Grassroots: Reflections on History, Gender, and Expertise*.

We have attacked white environmentalists for their concern with saving birds and forests and whales while urban children were suffering from lead poisoning. The trademark slogans of mainstream environmentalism are seen to reflect concerns of white people who are blind to the problems of people of color. (p 109)

Indeed, early leaders of the environmental justice movement had

criticized the Group of Ten environmental organizations in a series of open letters, conferences and declarations.

## Criticizing Eco-Efficiency

Like the previous current, criticisms and charges against eco-efficiency and sustainable development fly fast and furious, from both of the rival currents of environmentalism, as well as from zealous proponents of unregulated development in industry and government. In a critique of sustainable development, Peterson, Peterson and Peterson (2007, in *Environmental Justice and Environmentalism*) notes the recent move in the environmental literature and by ecologists away from the Pandora's box of sustainable development:

Many advocates of sustainable development discarded the concept when they discovered [it] was code for perpetual growth . . . force-fed to the world community by the global corporate-political-media network. Deep-ecologists eventually rejected the World Commission's definition for its implicit anthropocentrism, and environmental ethicists rejected [it] in favor of "ecosystem sustainability." (p 192)

Westman (2006) deals directly with the tremendous problems in properly assessing and addressing the cumulative effects of oil sands development on Indigenous peoples in northern Alberta. He discusses the diversity of environmental, cultural and social impacts of the oil sands, and details the almost

complete failure by the industry for environmental and social impact assessment. He also asserts the biased, poorly implemented and formulaic methodology employed “has become an aid in development ... to the detriment of Aboriginal rights” (p 31).

Westman argues that these official policies do not seriously question development or their inherent capitalist and technological assumptions; nor do they understand and truly value traditional knowledge and values, which serves to obscure rather than expose projected land use impacts. He asserts this “slipshod approach allows for a technical, almost strictly quantitative assessment, which fails to provide adequate information about the human cost of development” (p 36). Westman also charges that the narrow, technical constraint of the environmental assessment process trivializes traditional Aboriginal knowledge, practices and beliefs (if they are consulted at all). The system is not able to truly value and act on Aboriginal beliefs and traditional ecological knowledge (TEK), because the world views are incompatible, and the official regulatory process is usually stacked toward approval and business as usual.

Andrew Nikiforuk (1997) made the same charges and went further in his indictment of “The Nasty Game,” arguing that “it creates the illusion of environmental responsibility, when in fact no one is defending the public or the environment” (p 25).

The *Aboriginal Oil Sands Consultation Final Report*, released

by the Alberta government in June 2007, is also illustrative of problems with the dominant eco-efficiency approach to environmental governance. When one gets past the technocratic organizing language and into the personal testimonials of elders and Aboriginal leaders, it is obvious there are overt cynicism, frustration and a deep sense of betrayal. Two comments from members of the Fort McKay First Nation bear quoting here as evidence. One witness said, “We don’t segregate the impact of development into environmental, social or economic impacts. They’re all interrelated” (p 27). Another voiced the common suspicion that “There is still a high level of mistrust that not all information is being shared, and that industry secretly lobbies governments on issues” (p 12).

O’Rourke and Connolly (2003) discuss a wide variety of environmental and social effects of oil production, which, they assert, predominantly affect poor and marginalized groups, such as Aboriginal communities, before turning to the issue of industry regulation and enforcement:

The oil industry is regulated at each stage of its life cycle through a patchwork of environmental, health, and safety laws. Right-wing groups and the oil industry itself have argued it is actually “over-regulated.” Environmental advocacy groups argue, conversely, that while the industry is technically subject to many formal regulations, the implementation and enforcement of these regulations is all-too-often

inadequate, particularly in poor communities and developing countries. (p 609)

## Criticizing Environmental Justice

Of all the currents of environmentalism, eco-justice is the most neglected both in terms of political clout (until recently) and in being a target for documented internecine attacks. This is understandable for political considerations, to avoid being branded and vilified as classist, racist or sexist. One brave academic who took the plunge is Kevin DeLuca, in his essay “A Wilderness Environmentalism Manifesto: Contesting the Infinite Self-Absorption of Humans” (in Sandler and Pezzullo 2007, 27–56).

DeLuca begins his manifesto, a defense of wilderness environmentalism, by lamenting its attack by “a two-pronged assault,” from the forces of the “so-called environmental justice movement” on the political prong and the “post-modern deconstruction of wilderness” on the theoretical prong (p 27). One section (“Environmental Justice: All Humans, All the Time”) attempts to deliver knockout blows to the eco-justice interlopers.

The main concern of the environmental justice movement is humans. The non-human is only of interest insofar as it affects humans. Although the Environmental Justice movement is often concerned to clean up the environment ... at other times it is content to support practices that harm the

environment.... Never is the EJ movement primarily concerned with wilderness.... Indeed the Environmental Justice movement attacks environmental groups that support protection of wilderness or endangered species as racist and classist. (p 27)

It should be noted, however, that DeLuca also praises the environmental justice movement for its many successes, and he offers a special blessing on Aboriginal eco-justice practitioners for their special brand, which incorporates a deeply spiritual connection to the nonhuman environment that committed wilderness environmentalists revere, in this footnote disclaimer:

Here I am not considering Native American environmental justice groups. For historical, cultural, and spiritual reasons, Native American environmental justice groups are markedly different from other environmental justice groups. This difference is most apparent with respect to attitudes toward nonhuman nature. (p 50)

## Why Can't We All Just Get Along?

To some extent the accusations, conflicts and "jockeying for position" among the disparate currents of environmentalism represent the kind of political rivalry found in any healthy democracy, and spur valuable debate and public attention to the issues. At the same time, this division of forces enables the very degradation and suffering that environmentalists are trying to

curtail. Whether the conflict is among academics of competing disciplines, environmental groups competing against others to get their message out and have action taken, or affected communities torn by internal divisions, the barriers to consensus and meaningful communication are immense.

Similar to Thomas Kuhn's ideas of the incommensurability of disparate or rival scientific paradigms in the *Structure of Scientific Revolutions* (1962), radically different world views, and cultural paradigms are also often incommensurate. This incommensurability is illustrated in the literature critical of the many failures of environmental governance regimes, cumulative impact assessments and other technical methods for regulating development in the name of sustainability or environmental protection and stewardship. Whether one consults media or NGO reports, or government attempts at environmental consultations with the general public or Aboriginal communities, one finds evidence of the clash of cultural, political and deeply spiritual values that often defies consensual agreement among stakeholders and publics.

Soskolne (2008) predicts that the human race has only a few decades before war, rebellion and ecological collapse combine to bring the "train of technological progress" to a screeching halt. Some closing comments from the concluding chapter reinforce the arguments of both wilderness and environmental justice advocates, which offers both

a summary of the problems we face, and a plea for a new, interdisciplinary (or trans-disciplinary) approach to environmentalism:

In effect, markets are blind to the harmful ecological consequences of growth. And because the relentless pursuit of economic efficiency and material wealth has no moral or ethical compass either, we continue to erode natural systems whose sustainability demands time horizons that extend far beyond year-end shareholder reports and election cycles.... Our focus must shift from how people can be used to serve the economy, to determining how best the economy can be restructured to serve humanity and the ecosphere, now and for the long-term future. (p 421)

These sentiments also echo the innovative interdisciplinary approach to economics and social planning offered by Mark Anielski in his book, *The Economics of Happiness* (2007). His infusion of cultural and spiritual values into the cold calculations of neoliberal economics may be one way to bridge the communication and valuation gap that has plagued resource-based economies in the age of global markets. The recent moves by mainstream environmental groups, such as the Sierra Club and Greenpeace, to incorporate environmental justice and sustainable eco-efficiency in their policies and initiatives can only help in this transformation. As Sandler and Pezzulo (2007) state,

The goals of both the environmental justice and [wilderness] environmentalism

movements are urgent and worth advancing.... What is ultimately at issue is not whether one movement has more worthwhile goals or moral authority over the other, but rather, how the goals of both movements might be achieved together effectively. (p 2)

Judging by the testimony and responses published in the *Oil Sands Consultations—Aboriginal Consultation Final Report*, published by the Government of Alberta (2007), one has to conclude that a fundamental level of bicultural communication and cooperation has not been achieved. This is due, in part, because many consider these consultations to be mere window dressing or green-washing, largely after-the-fact public relations exercises, with no binding effect on future practices and policies. This is not amenable to building lasting trust or genuine cross-cultural dialogue. Lertzman and Vredenburg (2005) offer these comments in their concluding paragraph:

With their long-standing use and knowledge of ecosystems, Indigenous peoples play an especially important role in the cross-cultural dialogue on sustainable development. Ethically and practically, this is not something industrial society can achieve on its own. There are lessons to be learned from Indigenous peoples about the ethics and application of sustainable development. (p 251)

There are serious concerns over whether oil sands exploitation can or should even be considered to be sustainable development as opposed to inherently unsustainable—

considering the nonrenewable nature of the resource and the lasting environmental collateral damage entailed in currently practised extraction methods. Given these concerns, and the whole gamut of red flags raised by wilderness environmentalism and eco-justice activists, the gulf between these groups and the prodevelopment eco-efficiency establishment may be too wide to be bridged by existing technocratic mechanisms or institutions. In that case, continued activism may be the most effective way to address the sociocultural disruptions, and at least ameliorate the worst environmental degradation. Even a limited rearguard action is better than total surrender.

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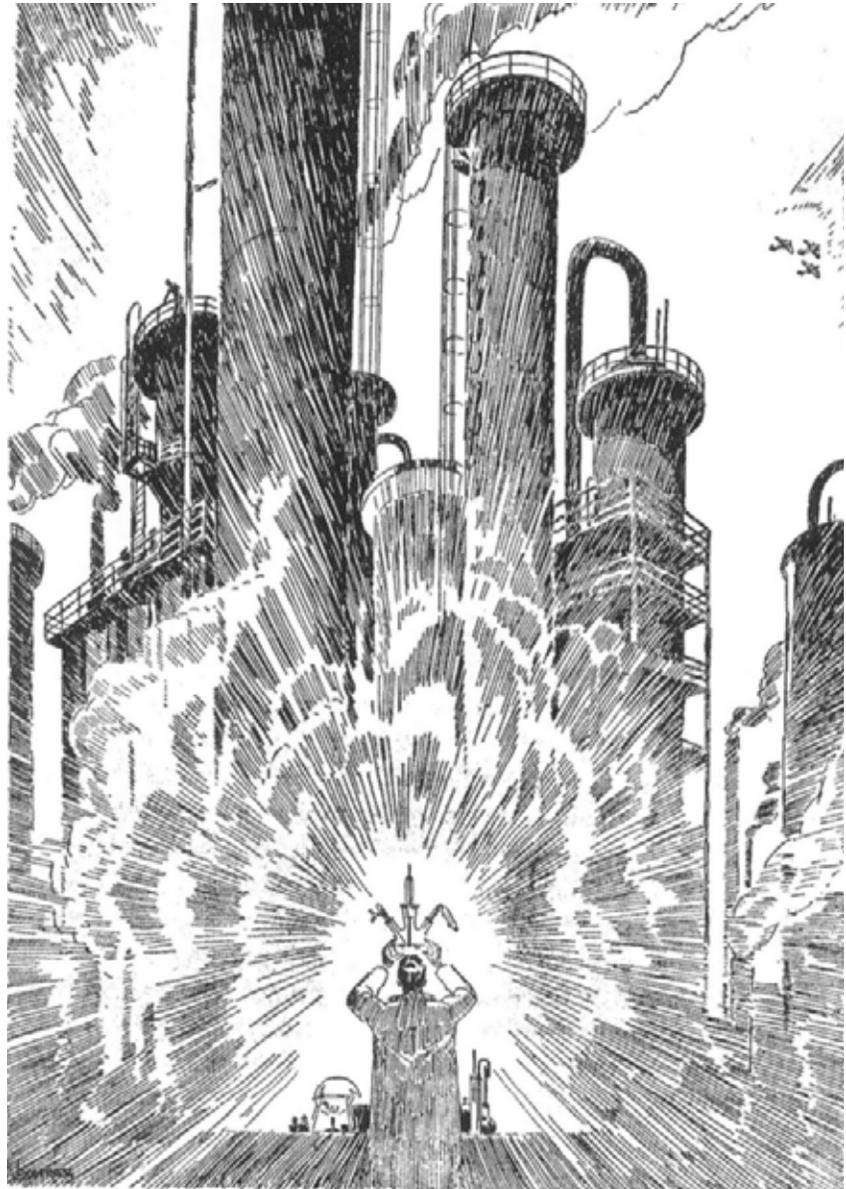


Figure 5: "Chemistry in Overalls," the chemist-priest in Morrison's *Man in a Chemical World*, chapter 2.

One of the photo-plates from *Man in a Chemical World* (1937), sponsored by the American Chemical Society, after University of Alberta history of science professor Andrew Ede's 2004 article "Creating an Image of Science: Persuasion and Iconography." In *Man in a Chemical World*, *Canadian Journal of History*, ed A Cressy Morrison, 39, no 3, 505.

Although the title of this illustration is "Chemistry in Overalls," it also makes a suitable poster for the Gospel of Eco-efficiency, evoking a technological take on the Benediction ritual from "High Mass." The refinery complex in the background easily mimics the "industrial spires" of Syncrude or Suncor.

# The Anthropocene: The Sixth Extinction

jan jagodzinski

How might we think pedagogically at this historical moment of climate change, known as the Anthropocene, where roughly 20 per cent of our species consumptive and productive activities within postindustrial societies since the 1950s have managed to accelerate global change to a point where the complexity of the Earth's system is at a tipping point? If global warming exceeds 3 per cent because of the continued CO<sub>2</sub> emissions, there is no accounting as to what, in terms of complexity theory, will become the new "attractor" as the planetary system changes from its historical pattern of warming and cooling phases that have been previously chartered within its geological record. The Holocene, which marks the epoch during which our species emerged, was a relative stable period, a blip in chronological time, comparatively speaking, to that of Earth-time. Human history is now, for the first time ever, wedded to Earth's history, as we are now an influential player in this complex system. There is a general agreement among climate scientists that there are nine parameters that are indicative of the precarity of our species survival: biodiversity, climate change and nitrogen, ocean acidification, freshwater use, land

use, stratospheric ozone depletion, and toxics and aerosols boundaries. Biodiversity, CO<sub>2</sub> emission and nitrogen are already foregone conclusions. Ocean acidification is around the corner. Added to these indicators are population growth (projection of 9.6 billion by 2050), and the ever-increasing danger that a world epidemic is likely to occur, much more widespread than the SARS epidemic. 2011 marks roughly the date when the irreversibility of extreme global warming has been publicly conceded, and the sixth mass extinction event calculated.

So how do we educators address our children by telling them there truly is a future? The discourse of the present by climatologists and activists is no longer trying to proleptically figure a catastrophe yet to come. The struggle is to grapple to find the rhetorical means to describe, for the future, what has already passed. Aside from ignoring the impending event of human extinction, as many do (after all, just what can be done?), the attitude is that business as usual should continue, which is exemplified by the Harper and Redford Conservative governments as they push for the Keystone pipeline, for instance. And why not?

It promises the revenue and the rhetoric of job creation, not only to keep them in power, but again assures economic growth and prosperity on the short run. We as a nation and province can continue to hold our own in the global marketplace. Our trading dollar remains viable on the global scene. The business of education is geared toward global economic competition, as each nation manoeuvres to make itself viable to play the neoliberal game of marketing, trading and banking in support of corporate lobbies. Our province is not any different. Thomas Lukaszuk's portfolio is that of minister of enterprise and advanced education. The push is to subject academic research to the dictates of the market and to support research that assures profitability.

Behind this attitude of "business as usual" is the discourse of "managerial hope" and a technological fix to climate change. When news of the Anthropocene appeared on the front cover of *The Economist*, it was presented more as an opportunity than a disaster. Speculation for new oil reserves in the Arctic and Antarctic are under way. A new political scramble as to which nation owns what land once

the glaciers disappear is currently being played out. Green capitalism and environmental management will save the day as corporations are to become socially responsible—Al Gore’s position. Genetic modification, genetic engineering and perhaps the projection of cold fusion or nuclear fusion or laser bombardment as the new pollution-free energy sources will cut back the carbon pollution. Here the Anthropocene is taken as that moment of realization by our species of the destruction it is creating. It says, “Hey, it’s never too late.” We do have a future. Trust the system we have. Trust creative human ingenuity.

The folly of this hope is that this very complex planetary system is given no agency, or very little: that Man (purposefully used here) as the designer engineer of the planet can

take control, as he always has, that the uncertainties will be eradicated by future technical refinements, and mistakes, such as nuclear fission, will not be repeated. The pliant matter of the Earth system will be moulded into the desired form. Within this fantasy of hope, the best that can be achieved is, however, the continuous struggle with a metastable entity that has its own consciousness. Hurricane Katrina, Hurricane Sandy and now Typhoon Haiyan, the most powerful recorded typhoon in history, are indicative of just how fanciful this management model is, embedded, as it is, in a profit-driven capitalist system where the 1 per cent are supported by the rest.

Where does this leave us educators? With the humanities (liberal arts), where the questions of ethics and politics are discussed

with young people, continually under siege, the future remains dark. Minimally, a counter-narrative to the one now in place requires the questioning of the human—of the Anthropos of the Anthropocene, a transevaluation toward a disanthropy that questions the ideology of the subject as the logical cause for the earth’s existence. To let that conversation happen in schools seems not to be economically or politically ripe at this moment. As climate change progresses and species extinction begins to be seen as a possibility, such a conversation will have been initiated too late, as it perhaps already is.

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*Jan Jagodzinski is a professor in the Department of Secondary Education at the University of Alberta, Edmonton, Alberta.*

# What Should Our Kids Learn About Energy?

Gareth Thomson



Last Friday I heard on the news about some students and parents who had signed a petition asking that teachers not use *Canadian Geographic's* new Energy IQ program. They claim that this program, funded by the Canadian Association of Petroleum Producers (CAPP), spends too much time on energy demand and production, and gives short shrift to the environmental impacts of energy, such as climate change.

It got me thinking. What *should* our kids be learning about energy?

The *Herald's* editorial page editor recently told me about her kids' school, which proposed to show *An Inconvenient Truth*, Al Gore's movie about climate change. When parents asked the school to also

present another movie—one with a very different point of view on climate change—the school decided to show neither movie. Presumably they did something safe and noncontroversial instead, like math.

Stories like this make me wild. Alberta kids should get the full meal deal when it comes to energy education. They need to increase their energy IQ and get a better handle on where our energy comes from and how it gets to their home. They need to understand the implications of our love affair with energy: that it permits our enviable lifestyle, can create serious social challenges and impacts the environment.

Should we expose our little darlings to the challenges of environmental issues? Of course. When they look out of the school bus window, they see pump jacks, transmission lines or perhaps just their comfortable suburban homes that are all created by, or supported by, energy. And then on the evening news they'll overhear outraged reportage about pipelines, or how bigger storms are linked to climate change, or that oil and gas production are edging sage grouse close to extinction in Alberta. Many of them will experience cognitive dissonance, the discomfort that



arises when we try to hold two conflicting things in our brains: can we actually maintain this enviable energy-supported lifestyle *and* simultaneously protect the environment?

They need help to figure that one out, to avoid descending into the feelings of guilt, despair or helplessness about the environment felt by many adults. We do kids a huge disservice if we don't let them wade into the glorious, messy world of the environmental issues that surround energy use, be it climate change, biodiversity loss and so on. They'll soon learn that we adults don't have all the answers or, more to the point, we propose different answers to the questions that confront us, because we have

different values that lead us to different points of view.

That's what an issue is, and they deserve to learn it. We need to teach kids how to think, not what to think. Teachers need to introduce students to the Energy IQ program so that they may discover, like me, that there is much they don't know about energy. In communication the medium is the message. Teachers should get kids thinking about why the CAPP-financed program spent more time on energy than on its impacts and create a bias-balanced lesson by

teaching about climate change using some other teaching resource and then have students think critically by looking for the bias in that resource as well.

Such lessons used to end with that most fabulous of open-ended questions: "What do *you* think?" But this is 2013, and the new Alberta curriculum finally is creating some much-valued white space to allow students to actually do something with their learning, so the last question is a new one: "What do you think and what are you going to do about it?"

Properly done, energy education is real world learning that helps turn students into well-informed and thoughtful citizens whose actions help create the world in which they will live. This is what students want, and this is what they deserve. And here's a bonus: education of this sort helps give Alberta the social license to operate, which we've been looking for.

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*Gareth Thomson is executive director of ACEE. He has over 20 years' experience in environmental education, working for the Government of Alberta and then as education director for an NGO.*

# Professional Development

## ATA Library

### Connecting You to a World of Information!

Sandra Anderson



Your ATA library has many excellent resources for teachers interested in global, environmental and outdoor education. Below we've created a list of some great titles available in our library. To find even more titles, try out our library catalogue (<http://library.teachers.ab.ca>). While you're on the page, please look for our Web Resources link on the left side of the screen.

We link to hundreds of websites that are reviewed by our librarians.

Remember, no matter where you teach in the province, you have access to all of these excellent resources. Just e-mail your ATA library at [library@ata.ab.ca](mailto:library@ata.ab.ca), and we will mail the materials to you and prepay the shipping back. There is never any cost for using your ATA library!

#### ***Adventure Education: Theory and Applications***

Prouty, Dick et al. (eds). 2007. Champaign, Ill: Human Kinetics [371.384 P968]

Covering the foundational theories and applications of adventure education, this book includes chapters on leader responsibilities, low- and high-level challenges, games, and safety.

***EcoJustice Education: Towards Diverse, Democratic and Sustainable Communities***

Marusewicz, Rebecca A et al. 2011. London, UK: Routledge. (304.2 M378)

Providing a powerful model for cultural ecological analysis and a pedagogy of responsibility, the authors discuss classroom practices to help develop a citizenry committed to diverse, democratic and sustainable societies.

***Ecoliterate: How Educators Are Cultivating Emotional, Social and Ecological Intelligence***

Goleman, Daniel et al. 2012. San Francisco, Calif: Jossey-Bass (36370071 G625)

Goleman tells stories of a new integration of emotional, social and ecological intelligence and shows educators how to cultivate these dimensions of human intelligence in their students.

***Effective Leadership in Adventure Programming***

Priest, Simon, and Michael A Gass. 2005. Champaign, Ill: Human Kinetics (790.069 P949)

Priest and Gass describe the organizational, instructional and facilitation skills that outdoor adventure leaders should possess. They identify the importance of flexible leadership style, problem-solving and decision-making skills, experience-based judgment, effective communication and ethical behaviours in adventure education.

***The Failure of Environmental Education: And How We Can Fix It***

Saylan, Charles, and Daniel T Blumstein. 2011. Berkeley, Calif:

University of California (333.7071 S275)

Saylan and Blumstein boldly argue that education has failed to reach its potential in fighting climate change, biodiversity loss and environmental degradation. They discuss how education can stimulate action to repair the environment by decreasing consumption and demand, developing sustainable food and energy sources, and addressing poverty. They examine school gardens, using school buildings as teaching tools, and the greening of schoolyards and demonstrate how our education system can create new levels of awareness and work toward a sustainable future.

***Outdoor Safety and Survival***

Nash, Mike. 2012. Victoria, BC: Rocky Mountain Books (613.6 N252)

This Canadian book provides great tips for safety and preparedness for all types of outdoor activities. It's highly recommended reading for anyone who engages in outdoor activities and adventure education.

***The Story of Stuff: The Impact of Overconsumption on the Planet, Our Communities, and Our Health—And How We Can Make It Better***

Leonard, Annie. 2010. New York: Free Press (306.4 L581)

In 2007, Leonard put together a 20-minute video about how we make, use and throw away stuff. (The online video, along with her new videos, is still available through her website: <http://storyofstuff.org/movies/story-of-stuff>.) This book

expands her original argument and documents her explorations of dumps and factories around the world.

***Teaching Secondary English as if the Planet Matters***

Matthewman, Sasha. 2011. London, UK: Routledge. (428.00712 M442)

Informing English teachers about environmental issues and offering ideas for teaching English lessons with ecocritical awareness. It focuses on using literature to engage students with their world.

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*Sandra Anderson became the ATA librarian in 2009 and has worked hard to get the word out about the best-kept secret at the ATA: the library and its services. She holds a master of library and information studies degree and is a highly skilled researcher. Sandra loves connecting people to the information they need, whether it is in books or hiding deep in the Internet. She is an expert Web searcher who has taught Web searching skills to a range of audiences. As an enthusiastic user of social media, Sandra regularly tweets and posts to the ATA's Facebook page on behalf of the library.*



# Miscellaneous PD Opportunities

## Green Learning— Climate Change Where I Live—Join the Discussion

We need your input! Tell us how you teach climate change at the local level, engaging students in examining the impacts of a changing climate on their city, watershed or region and the adaptations and mitigation measures required. Help us create *Climate Change Where I Live*, our newest free educational resource.

Go to [www.greenlearning.ca/news/climate-change-where-i-live-our-newest-free-educational-resource](http://www.greenlearning.ca/news/climate-change-where-i-live-our-newest-free-educational-resource) for more information and to join the discussion.

## Institute for Humane Education

This is an interesting website for both professional development and for possible activities to do with students. Check out their blog for some great discussion topics: [www.humaneeducation.org](http://www.humaneeducation.org).

## Calgary Science School

This conference, to be held May 23–25, 2014, will be significantly different from many others, with a focus on creating connections and conversations on

things happening in the world of education. There is also an opportunity to check out the classrooms of a very innovative school and bring ideas back to your own classrooms. Go to [www.innovatewest.org](http://www.innovatewest.org) for more information.

## U of A Spring and Summer Session Courses

A number of special session courses will be offered in 2014 that may be of interest to teachers. Dates and times have not been confirmed yet, so please check the Faculty of Education website at [www.education.ualberta.ca](http://www.education.ualberta.ca) early in 2014. Some of these courses will be offered at the graduate level (501) as well as the undergraduate level (401) and will be appropriate for both education students and practising teachers. If you want a stimulating experience looking at some cutting-edge issues that teachers face in classrooms, consider enrolling in one of the following courses.

### EDSE 401: Social Justice and Participatory Pedagogy

Instructor: Leslie Robinson

This course will focus on participatory processes and pedagogies for engaging toward

social justice through creative vehicles including art and design.

### EDSE 401: Society and Curriculum

Instructor: Cathryn van Kessel

Approaching curriculum in a way that addresses societal context can help teachers navigate the tension between curriculum-as-plan and curriculum-as-lived-experience.

### EDSE 401: How Inclusive Are We? An Exploration of Identity Politics and Multiculturalism in Secondary Schools

Instructor: Zahra Kasamali

The course will examine how palatable terminology, including *diversity*, *multiculturalism*, *pluralism*, *equity* and *social justice*, often reinscribes the racialization of many students and the universalization of Western ways of knowing and being.

### EDSE 401: Teacher Leadership for Outdoor Education Programs

Instructor: Dan Grassick

Over a one-week period (May 5–9), students will live, learn, play and work at the Camp Chief Hector YMCA, in Bow Valley Provincial Park, and become fully immersed in the outdoor environment so that emotional/spiritual change occurs along with the cognitive/pedagogical.

**EDES 401/501:  
Wisdom as Pedagogical  
Practice**

Instructor: Mandy Krahn

Wisdom is emerging as a unique way of approaching concerns of curriculum and pedagogy in educational contexts and as a sensibility toward living well; wisdom traditions will be considered as a way of being that has the potential of heightening well-being, wholeness and pedagogical relationships.

**EDSE 401/501:  
Perceptions and  
Explorations of Diversity  
in Schools**

Instructors: Monica Chalal and Zahra Kasamali

The intention of this course is to explore what cultural diversity means in today's classroom, going beyond tokenism to the heart of the matter. Issues that will be covered include pluralism, multiculturalism, colonialism and much more.

**EDES 401/501: Nurture  
Their Nature**

Instructor: Antonella Bell

This course will explore the philosophical and practical aspects of reconnecting children to the natural world. Participants will learn ways of slowing children down in order to encourage them to become aware of and to appreciate the natural world through art, story, nature journalling and experiential activities.

# EARTH MATTERS

A conference to help you develop your community of practice - and explore how the Earth Matters to you.



EARTH MATTERS



**ACEE** Alberta Council for Environmental Education  
ADVANCING ENVIRONMENTAL EDUCATION IN ALBERTA



The Alberta Teachers' Association



Global, Environmental & Outdoor Education Council

**April 24 - 26, 2014**  
**Radisson Hotel, Canmore**



With Ziya Tong, *Daily Planet* co-host and Gordon Stenhouse, grizzly bear expert

**Join us this Spring in the Rocky Mountains!**

We'll provide inspirational speakers, relevant workshops, and ample opportunities for you to work with other educators and create or develop a community of practice that is directly relevant to your work - because the 'Earth Matters'!

The first 100 registrants pay just \$225 - which includes the meal package!

**[www.abcee.org/conference](http://www.abcee.org/conference)**

**Questions?**

[conference@abcee.org](mailto:conference@abcee.org) or 403.831.8638

# Activities and Contests

## Activities

### Making Ice Cream with Snow

This year there is so much snow that making ice cream with snow should be an easy activity to do with your class. There are several Internet sources for this activity. Here are a few:

- <http://chemistry.about.com/od/snowsnowflakes/a/snowicecream.htm>

This recipe makes a small amount, but it is perfect for topping a steaming mug of hot chocolate after an outside adventure.

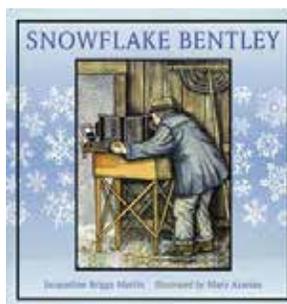
- [www.wikihow.com/Make-Ice-Cream-with-Snow](http://www.wikihow.com/Make-Ice-Cream-with-Snow)
- <http://backtoherroots.com/2011/01/11/snooowwww-day-snow-ice-cream>



### Snowflake Watch

Snowflakes are beautiful, and no two snowflakes are the same. Watching snowflakes is a great way to get kids outside and to look at something in a different way that we usually take for granted. Laminate 5-by-5-cm squares of black construction paper, and give one to each child to take outside the next time it is snowing. Bring a sketchbook or journal with you, and as the snowflakes fall on the black paper the children quickly sketch them before they melt. A great follow-up to this

activity is to read *Snowflake Bentley*, by Jacqueline Briggs Martin, and *No Two Alike*, by Keith Baker.



### Canada's Coolest School Trip 2014

Your class could win a four-day all-expenses-paid trip to Parks Canada places in British Columbia. The lucky class will fly with Air Canada and take part in ocean adventures, see wildlife, live the life of a World War I or II soldier, explore a historic lighthouse after dark and much more. Have your class choose a Parks Canada place that is important to Canadians and produce a video and a creative brief showing the place's natural or historical significance based on the theme "Canada's Coolest Stories: Where Nature and History Meet." Go to [www.contest.myparkspass.ca](http://www.contest.myparkspass.ca) for more information and to register.

# Contests

## Emerald Award Winners 2013

### Not-For-Profit Association (two recipients)

Edmonton and Area Land Trust

Project: Preserving Our Lands; Preserving Our Legacy

City: Edmonton

Calgary Folk Music Festival

Project: Eco-Initiatives Program

City: Calgary

### Large Business (two recipients)

DMI, Peace River Pulp Division

Project: The Nutriboost Program

City: Peace River

London Drugs Limited

Project: What's the Green Deal Program

City: Richmond (Head Office)

### Public Education and Outreach

Inside Education

Project: Teacher Professional Development Programs

City: Edmonton

### Community Group

Rob and Loretta Schaufele

Project: Road Watch in the Pass

City: Bellevue

### Government Institution

Alberta Environment and Sustainable Resource Development

Project: Alberta's Wet Areas Mapping Initiative

City: Edmonton

### Youth

Presented by 

Kelcie Miller-Anderson

Project: Mycoremediation of the Oil Sands

City: Edmonton

### Small Business

The Carbon Farmer

Project: Afforestation Project

City: Peace River

### Education: School or Classroom

Presented by 

Emma Gilberston, Deb Greiner, Antonella Bell from the Devonian Botanic Garden

Project: Green School and Kids in the Garden

City: Edmonton

### Emerald Challenge Award: WATER

Presented by 

Shirley Pickering

Project: Oldman Watershed Council

City: High River

### Individual Commitment (two recipients)

Michael J Mappin

Project: University of Calgary, Biogeoscience Institute Experiential Education Programs

City: Calgary

Dory Rossiter

Project: Dory's Enviro Work

City: Lethbridge

### Emerald Certified Shared Footprints Award

Established by 

Presented by 

Montane Elk Project

Project: Montane Elk Project

City: Edmonton

The Emerald Awards program, including the event, the production of finalist videos, the Sharing Stories communications activities and the stewardship of finalists, has an annual budget of \$500,000. All of these funds come from the support of generous sponsors, donors and partners, and the Emerald Awards program would not continue without such support. Thank you to all of our supporters!

# 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—Active and Associate 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.
- GEOEC members may also choose to belong to the Canadian Network for Environmental Education and Communication (EECOM) for an additional fee.
- ATA members may sign up for a GEOEC membership through the ATA website as their choice of one free specialist council membership included in the ATA annual fee.
- ATA members and subscribers may also sign up for a GEOEC membership and pay a fee determined by the GEOEC executive. From time to time the executive may decrease the fee to provide incentives for membership recruitment.

## Subscribers

- 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 hold office. Subscribers do have the right to serve as community liaisons on the council executive.

## 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 the publication of *Connections*.
- The GEOEC maintains a website in order to publish timely information and provide access to like-minded organizations and individuals.

## 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

- Members are elected to serve on the GEOEC executive.
- Contact the president or past president of the GEOEC through the ATA office if you are interested in seeking a position.
- Elections take place at the annual general meeting during the annual conference.

## Workshops

- Various activities and workshops are organized by the GEOEC either as standalone events or in conjunction with other organizations.

### 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 Membership

\$12.50 Student Membership

\$30 Subscription

\$10 EECOM Membership (in addition to GEOEC membership)

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

# Permission for Use of Photographs or Student Work

The Alberta Teachers' Association (ATA) requests the permission of parents/guardians for the reproduction of photographs depicting their children and/or the reproduction of work assignments completed by their children. The photograph/work will be reproduced in the Global, Environmental & Outdoor Education Council (GEOEC) newsletter, *Connections*, and is intended for teacher professional development.

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**Name of student** \_\_\_\_\_

I, \_\_\_\_\_ (printed name of parent/guardian of student), agree to the use of this photograph/work for the purpose stated above.

**Signature** \_\_\_\_\_

**Relationship to student** \_\_\_\_\_

**Address** \_\_\_\_\_

\_\_\_\_\_ **Postal code** \_\_\_\_\_

We have recently begun posting archived issues of *Connections* on the GEOEC website ([www.geoec.org/newsletter](http://www.geoec.org/newsletter)). Are you willing to have your child's written work posted on the Internet as well?

- Yes, I agree to have my child's written work posted on the GEOEC website.
  - Yes, I agree to have my child's written work posted on the GEOEC website, using a first name only.
  - No, I do not want my child's written work posted on the GEOEC website.
- 

**Please fax or mail forms to**

**Supervising Editor  
The Alberta Teachers' Association  
11010 142 Street NW  
Edmonton T5N 2R1  
Phone 780-447-9491  
Fax 780-455-6481**



**The Alberta Teachers' Association**

# GEOEC Executive 2013/14

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Global, Environmental & Outdoor Education Council

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