

**Canadian Geoscience Education Network Annual Meeting**  
**9:00 a.m. – 4:00 p.m., May 29, 2011**  
**Herzberg Building, Carleton University**  
**Ottawa, Ontario**

*Present:* Jan Aylsworth, Diane Baldwin, Charly Bank, Laura Clinton, Al Donaldson, Quentin Gall, Fran Haidl, Beth Halfkenny, Stella Heenan, Heather Henry, Richard Herd, Lesley Hymers, Sarah Laxton, Amanda McCallum, Godfrey Nowlan, Blyth Robertson, Ron Tremblett, Eileen Van der Flier-Keller, Christy Vodden, Miriam Vos-Guenter, Diane Wilson, Jane Wynne

**Report of outgoing President** (Godfrey Nowlan)

Godfrey introduced the new CGEN Executive for the term 2011-2013, effective at this meeting:

- President: Charly Bank (University of Toronto)
- President-Elect: Eileen Van der Flier-Keller (University of Victoria)
- Secretary-Treasurer: Christy Vodden (science writer, Ottawa)
- Past President: Godfrey Nowlan (Geological Survey of Canada, Calgary)

He commented that it had been an excellent year for CGEN, with solid movement on the eight priorities we identified at last year's meeting (discussion captured in pertinent agenda reports and in "Priorities" discussion, page 6), and on many other projects. He thanked everyone for their support during his term as CGEN President, and for their ongoing commitment to promoting CGEN projects and goals.

**Introductory comments from new President** (Charly Bank)

Charly thanked Fran Haidl for her huge contribution as President and Past President, noting that even though she was leaving the CGEN Executive at this meeting, she is still definitely "part of the team." He also thanked Godfrey for his work as President, noting that he "had moved a lot of important files forward" during his term.

He acknowledged the great job that Beth Halfkenny, Al Donaldson, Blyth Robertson and Erica Williams had done in leading the education and outreach activities at Ottawa 2011. He asked that thanks be passed along to all the students and other helpers, and indicated that he would write a thank-you letter to Carleton University's Dean of Science for his support. (*Action Charly*)

He talked about two priority areas that he planned to pursue during his term as CGEN President.

- Undergrads, with the goal of increasing awareness of the earth sciences as a study/career option during first year, and preferably even before they arrive at university.
- Aboriginal students, with the goal of increasing the number who take the earth sciences into their communities and work.

**Report of the Secretary-Treasurer** (Christy Vodden)

As of April 29, 2011, the CGEN bank balance was \$30,735.47, which includes \$10,085.47 for general CGEN activities, \$650 for the geoheritage project, and a \$20,000 ESS/NRCan Class Grant from the Geological Survey of Canada for the development of videos for the careers website. Other incoming funds were \$2,000 (for 2010 and 2011) from the Canada Prize Foundation, which, since 2007, has been a regular contributor of \$1,000/year (2010-2011 financial statement attached as Appendix 1).

The CGEN website moved in December 2010 from its long-time host, the Bedford Institute of Oceanography, to the Canadian Federation of Earth Science website: <http://www.geoscience.ca/cgen>. A major update was done in November, and another will be done once the minutes are available. Our contractor, Jennifer Smith continues to provide excellent service at a very reasonable rate. (*Action Christy - research costs to develop CGEN bookmark promoting new web address*)

Membership continues to increase. We now have 476 members, a total of 121 new members since last May. Filling geographic gaps in our membership was a priority identified at last year's meeting. (*Action all – send names and emails of any possible new members to Christy, so she can send an invitation to join CGEN. Gap areas are: Nunavut, Prince Edward Island, western Newfoundland, northern Alberta and Ontario, British Columbia: north and interior, Quebec: particularly Montreal, the petroleum industry and ocean sciences.*)

### **Debriefing on Ottawa 2011 education/outreach activities** (organizers/all)

Beth Halfkenny organized the teachers' workshop, hosted at Carleton University. She reported that 25 teachers attended, most at the high-school level with five from elementary schools. Break-out groups accommodated the different levels and interests. She noted that Carleton's Dean of Science, Dr. Malcolm Butler, was particularly supportive of the workshop, and provided funding for three teachers from First Nations schools to attend.

Beth was pleased by the 100% evaluation response rate, and by the positive comments made by the teachers (notably, the comments about the passion of the presenters and the level of commitment shown by a professional group). She is also going to seek feedback from the presenters. (*Action Beth – prepare report of teachers' workshop, including feedback from presenters, and share with Amanda for next year's workshop and with EdGEO*)

Beth indicated that promotion is an area requiring further thought, with the challenge being how to attract new people to our workshops – most participants come because they know one of the presenters. One idea was to encourage participants to promote the workshops within their schools. Another was to get buy-in from science resource school-board members, although with almost 400 boards in Canada there is difficulty in identifying and connecting with these people. (*Action Beth – encourage teacher participants of workshop to share resources and knowledge from workshop with their colleagues*)

The teachers' workshop included a full-day field trip of highlights of the geology of the National Capital Region led by Al Donaldson. It was open to others from the conference and 46 took part in it. The evaluation from the teachers was positive.

Blyth Robertson and Erica Williams organized and co-chaired a special session on geoscience education as part of the Ottawa 2011 technical program. Blyth commented that it was really a good idea to have a teacher as a co-chair. The session had 15 talks and two posters, and attendance was solid throughout the day (ranging from 20-40, which was the seating maximum of the room). Charly Bank noted that it would be nice to attract more posters to future sessions, as they provide an opportunity for one-on-one discussions. Richard Herd and Beth Halfkenny raised the question of including more space topics in our activities, as earth science and space are linked in the Ontario curriculum, with Beth noting that teachers had indicated that they would have liked this covered at the workshop.

### **Plans for 2012 meeting** (Amanda McCallum/all)

*St John's 2012: Geoscience on the Edge* runs May 27-29 (<http://stjohns2012.ca/>), and Amanda is organizing the education/outreach program. Plans include an EdGEO teachers' workshop and a field trip in the St. John's area (May 25-26), a special session on communicating geoscience to decision makers

(May 27), another on geoh heritage and its contribution to education and economic development (May 28), a public lecture (evening, May 29), and a post-conference field trip to the Bonavista Peninsula, with a focus on historical mining and Ediacaran fossils.

Amanda is fundraising to support the teachers' workshop, and has an application in with the Canadian Geological Foundation (note, a grant of \$12,700 was received). She is also trying to get the workshop sanctioned as a board-approved PD day.

### **Update on regional chapters** (Charly Bank/Eileen Van der Flier-Keller)

Building our regional chapters was a priority identified at the 2010 AGM. Godfrey Nowlan had reported that limited progress had been made during the past 12 months, and it should remain a CGEN priority.

Charly's cross-country "check-up" showed the widely divergent state of our regional chapters:

- B.C. has an active group, and there is interest in maintaining an annual CGEN meeting linked to the Mineral Exploration Round-up.
- Southern Alberta has a good network that does a lot of projects, but it is not an official CGEN chapter. Northern Alberta is a "dead zone." Richard Herd offered to talk to his son Christopher, a meteorite specialist at the University of Alberta, about getting something going. (*Action Richard*)
- Saskatchewan is very active and holds annual chapter meetings.
- Manitoba has an active outreach group led by Jeff Young, but they do not see the benefit of connecting with CGEN. It will be especially important to build a connection, as the 2013 joint GAC/MAC conference will be in Winnipeg. Fran Haidl offered to talk to Nancy Chow about this. (*Action Fran*)
- Ontario has active groups in Toronto, Ottawa and London. Connections between these groups, however, are variable. The geography curriculum is under revision and there is an urgent need for these regional groups to get involved with the review process. (*Action Charly/Ontario members – need to look at geography curriculum asap as revision is underway*)
- Quebec has an active group in Quebec City that is well connected with CGEN, but the issue of CGEN being a primarily English organization makes it difficult to show the benefit of more CGEN-linked chapters in Quebec.
- The Atlantic Provinces are well served by the Atlantic Geoscience Society Education Committee, which is the de facto CGEN regional chapter.
- Nunavut does not have a regional chapter, nor is there a CGEN member who could work on building one now that Linda Ham has moved out of her position at Indian and Northern Affairs. (*Action Diane Baldwin – provide Charly with names of people working in geoscience outreach in Nunavut*)
- NWT needs a regional chapter and Diane Baldwin volunteered to take the lead on this. (*Action Diane*)
- Yukon also needs a regional chapter and Sarah Laxton volunteered to take the lead. (*Action Sarah*)

All agreed that there are no easy solutions to finding people to take on the additional chore of being responsible for a regional chapter, but the bottom line is that these groups would have a huge value at the regional level in terms of networking and keeping an eye out for issues and opportunities of regional concern or benefit – the biggest area of concern being ongoing revisions to earth science curriculum. (*Action Eileen – consider setting a small task for regional groups to encourage more participation: possibility would be to ask regional groups to find out when earth science curriculum changes are planned and how they could insert themselves in the review process*)

### **CGEN projects**

### ***International Year of Planet Earth (IYPE)*** (Godfrey Nowlan/Laura Clinton)

The legacy projects of IYPE include:

- A **popular geology book** “Four Billion Years and Counting,” the manuscript of which is nearly complete. This has been an incredibly complex undertaking, with contributions from nearly 100 scientists. The text is now being edited to fit a 400-page book, with some out-takes being reserved for placement on the book’s website. Review of the reduced text by the publisher is expected in late 2011. Publication in late 2012 is the goal.  
<http://www.earthsciencescanada.com/4by/>
- The **careers in earth science website** continued to grow with the help of a \$20,000 grant from the Geological Survey of Canada that will fund the production of eight career videos in direct response to student feedback. Ongoing maintenance of the site is a concern and multi-year funding has been received from the Canadian Geological Foundation to support this, starting this year. A new section is under consideration by the Council of Canadian Chairs of Earth Science Departments to deal with students who have already decided to take earth sciences.
- A series of **Geovista brochures** that describe iconic views in national parks in terms of their geology is being developed, with eight for Jasper and two for Grasslands national parks completed – fundraising is underway for production in both English and French. It is hoped that they will be ready for distribution at the parks in summer 2011. Godfrey noted that the template for the brochure could be applied to any park and it is available from him. Eileen suggested that this might be a good task for regional chapters, and Heather Henry said that her group might be interested in doing one for a fictitious park in space.
- The **WHERE Challenge**, a contest for Canadian students aged 10-14, was run in 2010-2011 by the Mining Matters, with 129 entries representing the work of 1600 students. This is a reasonable number of entries, but Laura would welcome the help of CGEN members in promoting the contest to schools in their circle of influence, with a view to encouraging more entries. Laura also reported that funding had been difficult to find and Mining Matters had to absorb the costs. She will have to go to her board and ask for funding for 2012. (*Action Laura – to report back, after June 13, to Charly and Godfrey, whether Mining Matters will provide funding.*) If it’s a go, she will get publicity materials out to teachers by late September, at the latest, so they can incorporate the contest into their class plans. (*Action Laura/Godfrey – discuss revisions required for reprint of promotional postcard for careers website and Where Challenge*) Winning entries can be viewed at: <http://www.earthsciencescanada.com/where/>

### ***EarthNet*** (Jennifer Bates via email)

EarthNet has been offline for the past year, as a result of having to relocate to another server. This is a complex undertaking, and Jennifer has been investigating a way to rebuild EarthNet to accommodate the move. She recently found a knowledgeable colleague who is willing to help with the rebuilding, and she sees the “new” EarthNet focusing initially on the Atlantic region.

### ***EdGEO*** (Laura Clinton)

EdGEO was identified as CGEN’s top priority at last year’s meeting, and it has had a very productive year, with close to 350 teachers attending EdGEO workshops across Canada (EdGEO report attached as Appendix 2).

The completion of two educational resource manuals was a huge milestone for EdGEO. Together the manuals contain over a hundred lesson plans, and they are downloadable for free on the EdGEO website (<http://www.edgeo.org/>, click on “Resources” on the toolbar). One, “Bringing Earth Science to Life,” provides everything needed to put on an EdGEO workshop, including numerous lesson plans for all

levels; the other “Putting the Earth in Science” is aimed at higher levels with lesson plans that insert earth science materials into other science curriculum subjects. (*Action* Laura – to find out if we can track how many people download the online EdGEO educational resource manuals. *Action* all – continue to promote these resources)

Fundraising continues to be the major issue and Laura indicated that she needs help from the CGEN membership to carry this out. Another issue is finding the next EdGEO manager, as Laura’s terms ends in May 2013. (*Action* CGEN Executive – establish small committee to headhunt next EdGEO manager by next AGM. Handover would be the following year)

### **Geoheritage Project** (Al Donaldson)

The Ottawa Gatineau Geoheritage Project continues to be a dynamic group, involved in many public events and actively networking with groups with aligned interests (report attached as Appendix 3). The major highlight was the opening of the Metcalfe Geoheritage Park in Almonte, Ontario on October 16, 2011.

The goal of CGEN’s geoheritage project is to encourage the development of geoheritage groups across the country. As of yet, even though many geoheritage activities are underway, there have been no other groups aligning themselves with this initiative. Al indicated that one area where a network of geoheritage groups would be really useful is in looking into what protective measures and/or legislation exist for their areas.

He also noted that there are many sites across the country that have been developed as geoheritage sites, geological gardens and geowalks, and he would like to see these renamed as geoheritage parks. Fran Haidl suggested a promotion of the initiative through the CGEN/Canadian Federation of Earth Science outreach teleconferences. (*Action* Al – to encourage others with geological gardens and geowalks to rename them as geoheritage parks)

### **Geoparks** (Godfrey Nowlan)

North America has its first geopark, and it’s in Canada! The Stonehammer Geopark in the Saint John, New Brunswick area, was approved by the UNESCO-supported Global Geoparks Network and announced in October 2010. Stonehammer has been getting lots of visitors and media attention since. Website: <http://stonehammer.nbm-mnb.ca/main.html>

One of its main proponents, Randy Miller of the New Brunswick Museum, is this year’s recipient of the Geological Association of Canada’s Ward Neale Medal, awarded for “sustained outstanding efforts in sharing earth science with Canadians.”

A discussion ensued about the possible confusion between the geoheritage parks that the Geoheritage Project is interested in developing and these internationally sanctioned geoparks. Al agreed that any geoheritage park plans should be vetted by the Canadian National Geoparks Committee, chaired by Godfrey. (*Action* Godfrey/Al)

### **Geoscape** (Bob Turner via email and Jan Aylsworth)

Bob reports that there is a new GeoTour guide for the Salish Sea (the new name for the inland sea between Vancouver Island and the mainland), authored by Phil Hill, Jane Wynne, Audrey Dallimore and Robert Kung, all of whom are Geological Survey of Canada (GSC) staff at Sidney, BC. The guide will be available in 2011 and is the eighth GeoTour guide completed in BC. Another new GeoTour guide is underway for the Vancouver area, authored by Bob Turner, Marianne Quat and Malaika Ulmi, GSC staff in Vancouver. Publication is expected in 2012.

He also reports that GeoTour guides are heading east. A Northern Ontario GeoTour will be developed by the GSC, Ontario Geological Survey and partners such as Science North. Completion of the guide is expected in 2013. A GeoTour guide for parts of Atlantic Canada is also being considered. The Southern BC Geological Landscapes Highway Map will be published in 2012 and is the companion to the previously published Northern BC Geological Landscapes Map, available through the GSC Bookstore [http://gsc.nrcan.gc.ca/org/vancouver/bookstore/index\\_e.php](http://gsc.nrcan.gc.ca/org/vancouver/bookstore/index_e.php).

Jan reported that there are 34 lesson plans ready to be loaded on the Geoscape website (<http://www.geoscape.nrcan.gc.ca/>). Jane Wynne will help with the promotion, and they will send a notice to CGEN so we can alert our membership to them. (*Action Jan*)

***Integrating earth science with social studies*** (Eileen Van der Flier-Keller/Godfrey Nowlan)

This was a priority project developed at last year's meeting, with Eileen and Godfrey working on it. They did not make much progress, but examined Alberta and British Columbia social studies curricula for earth science content. Eileen may wish to pursue this during her year as Vice President.

***Resources website*** (Miriam Vos-Guenther)

The number two priority identified at last year's meeting was suggested by the participating teachers, and it was to develop a "one-stop shopping" site for top educational resources. Miriam graciously volunteered to put together a prototype. Her initial call letter netted hundreds of suggestions of good resources, and she had to abandon the original concept of presenting just the "top ten" best resources. The prototype has gone through one round of review. During the discussion at the meeting, there was a huge diversity of opinion on what would be the best and most user-friendly way to present the resources. It was agreed that a working group should be struck to work out a proposed approach. (*Action Miriam, Jane, Jan, Stella and Beth – brainstorm on how best to develop this website so as to meet needs of its stakeholders: teachers and CGEN members, and provide an update by year end*)

***What on Earth*** (Peter Russell via email)

After a lull in production, this earth science newsletter, produced at the University of Waterloo, is back in business. It has a new web address, <http://earth.uwaterloo.ca/outreach/what-on-earth>, where you can read the current issue and find an archive of past issues. (*Action Christy – to send note to all CGEN inviting them to subscribe to email notifications about new articles on What on Earth website*)

**CGEN priorities for 2011-2013** (all)

In light of the previous discussion, all agreed that CGEN's priorities over the coming year would be:

1. EdGEO: leadership transition and continued promotion of resources
2. Careers website: preparation of videos and reprint of promotional card
3. Setting up a small working group to look at streamlining access to the various websites linked to CGEN and its main projects. (*Action Godfrey*)
4. WHERE Challenge: continued support and assistance in fundraising
5. Regional chapters

Godfrey had also reported on two priorities set at last year's meeting that had had limited progress. They will not be pursued as priorities in the coming year, but will be kept in mind for possible revisiting in future.

- **Earth Science in High Schools:** The Advanced Standing Dual Credit agreement between the University of Waterloo and the Waterloo Regional School Board is now in place. Seventy students took Earth and Space Science in 2009-2010; 2010-11 figures are not yet known. About 10% of

those students ended up enrolling at the university. Discussions are under way with two more school boards in Ontario, and some school boards in New Brunswick are considering a dual credit initiative.

- Teacher Networks: There was tremendous growth in the teacher membership of CGEN during the past year, but Godfrey was not certain how well regional teacher networks had developed. There was a lot of sharing following the Putting the Earth in Science Workshop in Calgary last year.

#### **Planet Earth Institute** (Godfrey Nowlan)

It looks as if the concept of a Planet Earth Institute as iterated by Ed de Mulder last year as a legacy of the International Year of Planet Earth, will not go ahead.

#### **Reports from CGEN members**

##### ***Canadian Federation of Earth Sciences (CFES)*** (Godfrey Nowlan)

CGEN is the outreach/education arm of CFES, and the CGEN President is the CFES Outreach Director on their Executive. An important initiative is the CGEN/CFES Outreach Liaison Committee, a one-hour teleconference held quarterly with representatives of all CFES member societies, as well as other representatives of key science outreach interests in Canada. This continues to be an excellent forum for information sharing and networking.

##### ***Carleton University*** (Beth Halfkenny)

Carleton runs an excellent program of educational outreach, including school visits, teachers workshops, a one-week course for Grade 8 students, and the community-based Explore Geoheritage Day, which will take place for the third time in October linked to National Science and Technology Week. Beth reported that the goal of the outreach program is to ensure that students arriving as undergrads at Carleton have some awareness of the earth sciences as a career option. She noted that the outreach efforts seemed to be having some effect, as enrolment in earth sciences at Carleton has been increasing over the past few years.

##### ***Mining Matters*** (Laura Clinton)

Mining Matters had a very busy year (see report attached as Appendix 4 and the Mining Matters website, which has excellent sections for educators and for students). Some highlights included an ever-expanding aboriginal outreach program that puts on workshops in First Nations communities for teachers and runs summer camps for aboriginal youth. Mining Matters also built connections in Quebec and partnered with the Newfoundland Geological Survey to put on workshops in coastal Labrador and later in the Burin Peninsula. During the past year, Mining Matters connected with hundreds of teachers and students through its workshops and other activities, as well as pre-service teachers, Scientist in the Schools presenters, and aboriginal employment officers. Mining Matters also ran the WHERE Challenge, as previously reported.

##### ***Newfoundland Geological Survey*** (Amanda McCallum)

The Survey had several successful partnerships, in addition to the one with Mining Matters. Of particular note, it worked with the Canadian Institute of Mining, Metallurgy and Petroleum and the Newfoundland and Labrador Chamber of Mineral Resources on a successful three-day Mining in Society Show held during the 2010 Mining Week at the Johnson Geo Centre in St. John's. It was free to the public, and visitors were able to participate in a variety of interactive displays that explored the mining cycle and its importance to everyday life. An important focus was gender diversity issues in mining, and a Women in Mining Forum was part of the Mining Week activities. Survey education resources are available at: <http://www.nr.gov.nl.ca/mines&en/geosurvey/education/>

***NWT Outreach*** (Diane Baldwin)

The NWT Geoscience Office continued its active program of outreach. Highlights included a half-day session for students at the annual NWT Geoscience Forum and an earth science component for the multidisciplinary Daring Lake Tundra Science Camp, which had 16 students, four teachers and three elders as participants. More details and downloadable educational resources at: <http://www.nwtgeoscience.ca/outreach/>. Diane reported that their focus in the past had been mining, but a more general focus on geoscience was emerging based on the recognition that NWT needs “to build” more geologists.

***Ontario Mining Association*** (Lesley Hymers)

Another very active outreach/education group, the OMA’s main focus is high school students, and one of its main ways to connect with this group is through its annual *So You Think You Know Mining* video contest. The 2010 winners can be viewed at: <http://www.oma.on.ca/en/contestpages/index.asp>. This contest is really expanding; there were double the submissions from the previous year, with 82 videos submitted. Other highlights included stronger connections with Let’s Talk Science; collaboration with EdGEO, Mining Matters and other groups to put on a mining tour for teachers (see Appendix 5 for full report).

***Saskatchewan Geological Society*** (Fran Haidl)

The SGS has a very active education and outreach group that is well connected throughout the province. Highlights included its annual school talk/public lecture. This year’s topic was meteorites, and the speaker Ellen Milley, University of Calgary, presented it three times, over two days, to almost 650 grade 6,7 and 8 students in two schools. It was also presented as a free public lecture at the Saskatchewan Science Centre, with 100 in attendance (see Appendix 6 for full report).

***Shake Out BC and Salish Sea Expedition*** (Jane Wynne)

Shake Out BC, a province-wide earthquake emergency drill, was held for the first time on January 26, 2011, with 470,000 people registered as participants. Seismologists and other staff from the Geological Survey of Canada (GSC) at Sidney, BC worked with BC emergency planners on this project and built good working relationships. Lessons learned will be applied to the next Shake Out, which will take place in October 2011 <http://www.shakeoutbc.ca/>. Jane also reported a \$20,000 grant from PromoScience was used by partners, including the GSC, to send the research vessel “Vector” on a five-day expedition that brought interactive science to five communities in the Salish Sea area. Videos and blogs from the expedition are posted at: [http://gsc.nrcan.gc.ca/org/vancouver/salish/index\\_e.php](http://gsc.nrcan.gc.ca/org/vancouver/salish/index_e.php).

***University of Toronto*** (Charly Bank)

Charly is responsible for geoscience outreach at U of T, with a focus on high school teachers and students. He raised an issue linked to a multi-university field camp at Whitefish Falls, Manitoba, specifically “Dreamer’s Rock,” an area of special importance to the aboriginal community and to which the elders denied access to the universities last year. This year Charly and his students met with elders, with the result that they were invited to make a presentation about geology to about 70 local students. U of T students were given access to “Dreamer’s Rock” shortly after, and Charly felt there was a direct link between this access and the awareness building with the elders and students. Charly’s group is invited back next year to give another talk, this time to the local high school, which has 1500 students.

***University of Victoria*** (Eileen Van der Flier-Keller)

U Vic’s School of Earth and Ocean Science was very active in the BC Year of Science (<http://yearofsciencebc.ca/>), producing nine web-based, hands-on science activities for BC youth and 18 five-minute career profiles of U Vic scientists. Another initiative involved mentoring and training four undergrads and three other volunteers to deliver earth science outreach presentations. During the year,



presentations were given to 42 schools (totalling nearly 2500 K-8 students). U Vic also participated in 11 public and community events, and four teacher workshops that reached 94 teachers. Eileen reported that they were also helping develop an earth resources component for the Hartland Landfill Interpretation Centre.

***Univ. of Western Ontario Centre for Planetary Science & Exploration*** (Heather Henry)

This group provides a range of K-12 workshops and class visits, led by student TAs, as well as workshops for teachers – the latest was held April 8 as part of the Thames Valley District School Board PD day, with 26 teachers from over 15 schools and two school board staff members participating. Report attached as Appendix 7; more details and resources at: <http://cpsx.uwo.ca/outreach> (*Action Heather – to prepare a short report on how the outreach TA program runs at UWO*)

***Yukon Geological Survey*** (Sarah Laxton)

Outreach activities include school connections and participation in events, such as the 2010 Mining Week, which had about 500 participants, and a Women in Trades and Technology show for all grade 9 and 10 female students that had about 200 participants. Sarah recommended the Yukon Permafrost Network's Permafrost 101 website as a source of good information and some fun videos about the adventures of the permafrost "Tunnelman." This is a joint project of the Survey and the University of Alaska. Report attached as Appendix 8. (*Action Sarah – to share link to permafrost resources*)

**Timing for next meeting** (all)

Given the tight schedule at St. John's 2012, the CGEN annual general meeting will be an abbreviated one, held 2:00-6:00 p.m., Tuesday, May 29 at the Delta Hotel. As a result, here will be a focus on what needs to be done in the coming year, rather than on reports of activities during the past year – these reports will be appended to the minutes.

**Activity exchange** (Jane Wynne)

S and P seismic waves exercise

Christy Vodden  
Secretary-Treasurer  
January 11, 2012

**Canadian Geoscience Education Network  
2010-2011 FINANCIAL REPORT**

Balance at last report (as of April 30, 2010) \$20,122.29

Incoming funds:

Teacher registration for Calgary workshop, May 2010	\$2,300
Canada Prize in support of CGEN activities, July 2010	\$1,000
Canada Prize in support of CGEN activities, January 2011	\$1,000
GSC/NRCan grant in support of careers website, March 2011	\$20,000
Interest (May/10 – April/11)	\$0
Total incoming:	+\$24,300
Sub-total:	+\$44,422.29

Outgoing payments:

1. *EdGEO* (from \$13,000 remaining from GSC/NRCan grant for teachers' workshops)

Cooper, 08/05/10	\$700
Danyluk, 08/05/10	\$550
Carroll, 08/05/10	\$1,000
Nowlan, 08/05/10, field trip expenses	\$728.27
Donnelly, 08/05/10	\$350
Johnston, 08/05/10	\$800
St. Lawrence, 08/05/10	\$1,000
Hillier, 08/05/10	\$500
Webb, 08/05/10	\$1,000
Dwarven Mountain Rock & Mineral, 08/05/10	\$598.50
SAZ Café, 08/05/10, EdGEO catering	\$736.37
GAC, 19/05/10, bus rental	\$157.63
EdGEO, 23/12/10, remainder of grant	\$4,500

[Note: \$379.23 was kept for the CGEN general account to cover administration of grant]

2. *CGEN core activities/administration*

Nowlan, 16/05/10, to cover catering of AGM (Saz Café)	\$542.38
Vodden, 09/12/10, update of membership e-list and website	\$254.25
Haidl, 12/01/11, Saskatoon regional meeting	\$94.59
Smith, 31/01/11, website update	\$75.00
Van der Flier-Keller, 02/03/11, Vancouver reg. meeting	\$99.83

3. *Geoheritage* [no expenditures]

Total outgoing: \$13,686.82

<b>BALANCE (as of April 29, 2011)</b>	<b>\$30,735.47</b>
Breakdown:	
CGEN	\$10,085.47
Careers website	\$20,000
EdGEO workshop	\$0
Geoheritage	\$650

Outstanding cheques totalling: \$10,019.81

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Christy Vodden  
Secretary-Treasurer  
May 29, 2011

**EdGEO Report to CGEN – May 29, 2011****L. Clinton**

This report provides an update of EdGEO operations during the last fiscal year (April 1, 2010 to March 31, 2011).

***Workshops***

Thirteen EdGEO workshops were scheduled and ten were delivered during the last fiscal year. There were three workshops in British Columbia, two workshops in Alberta, three in Ontario, and one in each of Nova Scotia and Quebec. One workshop was cancelled in BC, one was cancelled in Manitoba, and one was cancelled in Ontario. Total attendance was 318.

These numbers don't include the EdGEO workshop held in Calgary at GeoCanada 2010.

With support from the GSC, Stella developed "Putting the Earth into Science" a classroom resource containing a series of curriculum-based lesson plans that take an interdisciplinary approach to expanding Earth science content in Canadian high schools. The resource was launched at a workshop and fieldtrip for Teachers at GeoCanada 2010.

Our goal was to involve teachers that were well positioned to expand the inclusion of Earth science into mainstream high school science and mathematics courses in their home region. This included science lead teachers, school board consultants, and experienced professional development presenters. To achieve this, an application form was put together and sent to selected Earth science outreach people across Canada with the hope that they would identify key teachers in their region to attend the workshop.

At the same time, regional and provincial Earth science organizations were approached across the country to help support the travel and accommodation of teachers coming to the workshop. Of the 25 registrants for the workshop, 21 were supported by a variety of organizations with help in most cases from their school boards. The registrants came from eight provinces.

The teachers attending the workshop were encouraged to provide workshops for their fellow teachers in their region to spread knowledge of these activities.

Funding approached \$23,000.

NS – 24 teachers

ON – excess of 45 at STAO and 30 at OAGEE

MB – kit can be booked through the Winnipeg School Division

SK – one workshop at a local conference

AB – one at the teacher workshop

NB – one in May

NL – involved in the development of the new curriculum – opportunity at GAC/MAC next May

At the time of this report, three workshops have been approved for funding for the 2010/2011 fiscal year – including one at Stonehammer Geopark.

**Finances**

Revenue of \$23,288.58 was secured from the CGF, CGEN and CSEG Foundation and workshop refunds.

Expenses amounted \$43,260.94, of which \$19,276.35 is attributed to workshop support. The remainder of the expenses is for resource development, the Geocanada 2010 workshop, the Web site, travel and a small amount

for accounting support.

We had money in the bank (\$32,000) when the fiscal year began. As of March 31, 2011 total assets for EdGEO were \$13,417.35. We have approved commitments of \$8,090 for 2011/2012.

An application to the CGF was submitted in March requesting support of \$48,000 over three years. The CSPG Educational Trust Fund has pledged \$12,500 in support. It is time to renew sponsorship dollars from corporations that gave two years ago.

**EdGEO Executive Committee**

Laura Clinton  
Sheila-Dale Johnston  
Toon Pronk  
Jane Wynne

**EdGEO Regional Committee**

Charly Bank  
Laura Clinton  
Beth Halfkenny  
Stella Heenan  
Lesley Hymers  
Amy Nishio  
Claire Toner

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**Friends of Canadian Geoheritage  
Annual Report to Canadian Geoscience Education Network, May 2011**

**Ottawa-Gatineau Geoheritage Project (OGGP)**

The OGGP Committee has continued to meet regularly in Ottawa. From April 2010 until recently, Committee Secretary Blyth Robertson ably took over shepherding the 15 executive members of this group while Al Donaldson was occupied with other commitments. A major effort during his tenure was organizing the highly successful Ottawa 2011 CGEN outreach session that many of us attended. Beth Halfkenny again organized an excellent Ottawa Geoheritage Day, October 24, 2010 and Al Donaldson, with his Almonte Geoheritage Committee, organized the official opening of Metcalfe Geoheritage Park that took place on October 16, 2010. About 60 attended, including the mayor and several councilors of the town of Almonte. Al and his colleagues once again organized a geotour for the Grenville Land Stewardship Council in Brockville. More than 100 signed on for this trip: a St. Lawrence River Cruise that took place on a fabulous fall day (Oct.17, 2010). Al led an earlier geotour of Lanark County for the [Mississippi Valley Field Naturalists](http://mvfn.ca/?tag=geology) (<http://mvfn.ca/?tag=geology>).

Beth Halfkenney and Al Donaldson gave presentations for the Fall Conference of O.A.G.E.E. (Ontario Association for Geographic and Environmental Education) Oct. 29,30, 2010.

OGGP continues to display its growing array of posters during many events, including Ottawa Heritage Day at City Hall (February 22), and the Ottawa Gem, Mineral & Jewelry Show (September 24-25). OGGP members have continued to give talks to groups throughout the region, and have expanded their collaboration with other natural science groups. One group of particular interest is the Coalition to Protect the South March Highlands. We were invited to provide a display and lead walks to look for occurrences of significant geoheritage features within an area just west of Kanata during a one-day Bioblitz. Because this area is under threat of degradation to accommodate development, discovery of such occurrences could add clout to actions by CPSMH to preserve an area that contains endangered species of both plants and animals (much of a significant old-growth forest has already been lost, in spite of appeals an court action now underway). Al Donaldson accepted the invitation to participate, but when he discovered that the date subsequently chosen for the Bioblitz coincided with his post-GAC Field Excursion, he asked colleague Dave Forsyth to exhibit his (Dave's) GAC poster of distinctive dewatering

structures in Paleozoic Sandstone that may well occur in greater abundance within the SMH region than presently known. Dave and his wife Mary prepared an accompanying display of other geological features that attracted many biologically inclined participants during this event; a subsequent Geoblitz to search areas underlain by Paleozoic Sandstone is now being considered by the CPSMH executive. Because the route of the GAC Field Excursion for Earth Science Educators passed by the building housing the Bioblitz displays, an impromptu stop was added to allow participants to view Dave's poster, as well as the many biological displays set up for the day.

Allan Donaldson  
May 28, 2011

**Mining Matters Program Summary**  
**January to June 2011**  
**Aboriginal Outreach Program**

<b>Description</b>	<b>Locations</b>	<b>Attendance</b>	<b>Notes</b>
PD workshops for teachers	Ontario First Nation communities of: Wunnumin Kingfisher Kasibonika Big Trout	110 teachers who oversee the education of 1034 students	Two teachers from Kasibonika FN were identified as candidates to attend the GAC/MAC conference and education event held in Ottawa in May.
Labrador Student and teacher workshops	Coastal Labrador communities of : Nain Hopedale Makkovik Rigolet	10 teachers and 83 students	Presented in partnership with NL Geological Survey. Each school received our curriculum-linked classroom resource kit to continue program delivery.
Ontario Ministry of Natural Resources Career Tour	Thunder Bay Nipigon Terrace Bay Marathon	860 students and teachers	Presentation of mineral resources learning activities and career information.
Mattawa Tribal Council Employment Office Training Day	Thunder Bay	24 Aboriginal employment officers	Two-hour workshop about mineral resources and career opportunities.

**Upcoming**

The Aboriginal Youth Outreach Summer Camp Program has expanded to ten camps running sequentially this summer in Rainy River First Nations, Geraldton, Upsala, Flin Flon, Fort Francis, Eagle Lake First Nation, Wabigoon First Nation, Webequie First Nation, Marten Falls First Nation and Attawapiskat with an expected reach of 740 youth.

## Mining Matters: Education Program

Description	Locations	Attendance	Notes
WHERE Challenge	National	1598 students participated in the challenge	Approximately \$10,000 in prizes awarded with winners in every region except Quebec.
Scientists in Schools: Presenter PD and in-class workshops	Toronto	131 students, teacher and parent volunteers as well as 12 presenters	9 of the 12 presenters have the potential to reach an estimated 7,560 students per year.
Education Event at the PDAC Convention	Toronto	38 teachers, 112 students and 11 parent volunteers	Sponsored by IBK Capital Corp. Bill Mercer was the keynote speaker. Excellent feedback from participants.
PD workshops for pre-service elementary teachers	York University, Toronto Queen's University, Kingston	199 pre-service teachers	Deeper and Deeper junior resource.
PD workshops for pre-service secondary teachers	Queen's University, Kingston	65 pre-service teachers	Discovering Diamonds senior resource.
Elementary Teachers Federation of Ontario PD Workshops	Brantford Fergus	34 teachers	Deeper and Deeper junior resource.
EdGeo Teacher Workshops in conjunction with GAC-MAC 2011	Ottawa	23 teachers	Workshops for Deeper and Deeper, Discovering Diamonds, and Geoscape were delivered in partnership with CGEN members
Upper Grand First Annual ELL Outdoor Education Day	Orangeville	46 students	Parents, grandparents and teachers were also present
Manitoba Train the Trainer Event	Winnipeg	4 teachers trained as facilitators	Additional stakeholders in attendance included Ministry of Education University of Manitoba Winnipeg School Division Ministry of Innovation, Energy

			and Mines
Manitoba PD Workshops for teachers	Prairie Spirit School Division, Pilot Mound	20 teachers	Delivered by two of our newly trained facilitators
<b>Description</b>	<b>Locations</b>	<b>Attendance</b>	<b>Notes</b>
Newfoundland student and teacher workshops	10 workshops were delivered on the Burin Peninsula: Marystown St. Lawrence Fortune Teranceville	249 students and 13 teachers	Presented in partnership with NL Geological Survey. Each school received our curriculum-linked classroom resource kit to continue program delivery.
Quebec Focus Group	Montreal	9 curriculum consultants, teachers and government representatives	Presented in partnership with MinAlliance.

Mining Matters Education Publications now available in French:

- GroundWORK 2010-11 (Educator Newsletter)
- Cutting Edge Poster (Use of mineral resources in the sport of skating)
- Northern Lights – Snowmobile Poster (Use of mineral resources in a snowmobile)
- Select sections of Grade 4 Deeper and Deeper resource

### Upcoming

Mining Matters will be delivering two workshops in Laval for French and English teachers attending the Elementary Math, Science and Technology Symposium on June 28<sup>th</sup> and 29<sup>th</sup>. Over 500 teachers are expected to participate in the event.



## Mining Matters: Public Outreach Program

Description	Locations	Attendance	Notes
Earth Science for Society	Calgary	Over 2,000 students, teachers and general public	Event coordinated by the CSPG, the CSEG, and the Canadian Well Logging Society in conjunction with the annual Geosciences Convention.
Manitoba Mining Week	Winnipeg	Over 2,700 students, teachers and general public	Event coordinated by the Ministry of Innovations, Energy and Mines.
Mining 4 Society	Montreal	Over 6,000 students and 400 teachers	Event coordinated by CIM. 50 staff to deliver the program – all wearing t-shirts with our logo.
Timmins Mining Week	Timmins	Approximately 300 students, teachers and general public	Supplied educational resources and activities to Porcupine Prospectors Association to execute.
Sudbury Mining Week	Sudbury	Over 250 high school students	Event coordinated by Science North, Dynamic Earth and Laurentian University.
North Bay Mining Week	North Bay	248 elementary students and 11 teachers	Supplied educational resources to support the event.

### Upcoming

#### MeMO:CIM: Mining 4 Society Saskatoon

Mining Matters has been asked to participate on the planning committee for this program. Similar to last year's program in Sudbury, Mining Matters will be essential to creating an exciting learning environment for this mini- M4S show.

#### Mining 4 Society Edmonton 2012

The first meeting of the planning committee is scheduled for June 15<sup>th</sup>. Mining Matters will play an active role in guiding the local planning committee for next year's national show in Edmonton.

## **Ontario Mining Association Activities Report CGEN Meeting May 2011**

### **So You Think You Know Mining Video Contest**

- > 100 % increase in uptake
  - 82 videos submitted
  - SYTYKM Awards Gala will be held at the Royal Ontario Museum on Wednesday June 1.
- The OMA partnered with Cambrian College to develop the curriculum for a video production workshop
  - One day workshop for high school students will be held at Cambrian and make use of their video production expertise and facilities
  - Workshop will be held in early in the 2011-2012 academic year

### **Let's Talk Science**

- Partnership discussions continue with Sara Steers, Director External Relations
  - Continuing to discuss opportunities to links web sites, participation in the All Science Challenge and contributing content and links to the CurioCity website. The OMA has identified industry professionals to profile on the LTS web site: Environment Professional and CEO
  - LTS and the OMA are currently drafting a partnership proposal
- LTS will be making a presentation to the OMA Board of Directors at a future date

### **Teachers' Mining Tour**

- CEC, OMA, CIM and EdGEO collaborated to deliver a teacher professional development program at the Canadian Ecology Centre, August 9-13.
  - 5 days of programming that included mine site visits, resources workshops and opportunities to engage with industry professionals.
  - Program was well received by teachers and sponsors-continuing program
- The OMA, Canadian Ecology Centre and PDAC Mining Matters developed a 2010 Tour follow up survey that was circulated onto the teachers who participated in the event.
  - Review of the responses and data analysis has initiated and will continue
- The 2011 Tour program is under development and will include:
  - Site visits, resource workshops and presentations
  - Measures to contextualize geological underpinnings for mining operations (geological tour of the Sudbury Basin)

### **Skills Canada Ontario**

- Participated in the 2011 Skills Canada Ontario Competition (May 2-4, RIM Park-Waterloo)
  - hosted a career exploration showcase booth
    - displays, hands on activities and mineral industry professionals
  - delivered mineral industry career exploration workshops to students from Ontario.
    - Hands on activities for six mineral industry careers
    - 6 classes from schools in the Upper Grand District School Board

### **Toronto District School Board Teacher Professional Development Workshop**

- Participated in a Toronto District School Board Teacher Professional Development Workshop in the Department of Geology at the University of Toronto (February 18).
- Delivered a mineral industry career presentation and discussed career teaching resources with the

teachers present

#### **PDAC Convention**

- Participated in the PDAC Mining Matters Teachers' Events at the PDAC Convention.
- Showcased mining career activities and lead PDAC MM Deeper and Deeper Grade 4 resource workshop

#### **School Visits**

- Participated in Career Day at Frenchman's Bay Public School in Pickering
  - Delivered a mineral industry career presentation to 20, grades 7 & 8 students **GAC/MAC 2011**
- Mining Industry Human Resources Council Speakers Bureau Presentation
  - Delivered a presentation and hands on activities to students at Agnes Taylor Public School in Brampton

#### **Mining New Opportunities**

- Renewed interest in this resource, focused toward Aboriginal Engagement in the mineral sector (Ring of Fire development)
- Considering a reprinting of the resource and renewal of delivery

## **Activities of the Saskatchewan Geological Society (SGS) Education and Outreach Committee (EOC), 2010**

### **Teacher Workshops**

The SGS delivered a short workshop on “Diamonds in Saskatchewan” to 22 teachers at the Prairie Valley School Division Professional Development Day on February 19, 2010. We are exploring the possibility of partnering with the University of Regina and University of Saskatchewan to provide Earth Science workshops for Education students in 2011. If anyone has any ideas about undertaking other workshops we are open to suggestions.

A workshop and field trip for teachers was held May 8 and 9, 2010 in conjunction with GeoCanada 2010. On May 8, EdGEO ([www.edgeo.org](http://www.edgeo.org)) presented a workshop for teachers entitled “Putting the Earth into Science”, which was aimed at teachers of high school chemistry, physics, biology, general science, environmental science and mathematics. The goal of the workshop was to provide teachers with the resources to incorporate Earth Science topics into those core subjects, through an interdisciplinary approach. The workshop was open to teachers from across the country and the SGS, SMA and APEGS collaborated to find suitable teachers from Saskatchewan to take advantage of this excellent opportunity. In the end there were ten Saskatchewan educators from across the province who participated. The SGS, APEGS and SMA each provided \$1000 to help fund the travel expenses of four of those educators. Eighteen hands-on activities developed by EdGEO were piloted by the workshop participants. Each participant received a CD, which included the activities and supporting documentation, plus many of the materials required to undertake the activities. Contents of the workshop CD can be found at: <http://www.edgeo.org/images/pdf/putting-the-earth-into-science.pdf>.

On May 9, most of the workshop participants took part in a field trip to the Royal Tyrrell Museum in Drumheller. Unfortunately, the weather did not cooperate because it rained through Friday night in Drumheller making the planned short hike through the badlands impossible. However, the teachers enjoyed the mini-workshops presented by museum staff and, of course, the time they spent exploring the museum.

### **Geoscape Southern Saskatchewan**

We continue to receive requests for the *Geoscape Southern Saskatchewan* poster, and for Word versions of our lesson plans and additional Earth Science information via our website email address. Posters were also distributed to teachers participating in the SMA Teachers’ Mine Tour and the Prairie Valley teacher workshop. In 2011 we hope to add a few more new Saskatchewan-specific lesson plans to the website.

### **Public Lectures**

In 2010 the spring school/public lecture, entitled “Bright Lights and Black Rocks: Fall and Recovery of the Buzzard Coulee Meteorite, West-Central Saskatchewan”, was given by Ellen Milley, Department of Geoscience, University of Calgary. This year we worked closely with the science consultants from the various school boards and increased attendance at the school lectures. We went back to a two day schedule this year. On Wednesday May 5<sup>th</sup>, there was both a morning and afternoon lecture at Thom Collegiate, with about 150 grade 6 to 8 students in the morning and 320 in the afternoon. On Thursday afternoon there was a third school lecture at Miller High school, which was attended by about 150 students. Students at all the lectures were thrilled to actually get to touch and hold pieces of meteorites. They were impressed with how heavy the meteorite fragments were. The free public lecture, held on Wednesday evening in the Sasktel Max Theatre at the Saskatchewan Science Centre, was well attended.

Plans are underway for the 2011 spring school and public lecture in Regina and we are looking for volunteers to help run this event. If anyone has ideas for possible speakers, please contact Kate

MacLachlan. We are specifically looking for speakers who you know have experience speaking to grade 6-8 students, so please make sure that anyone you suggest is good at communicating to young people.

### **Open House Public Lecture**

Once again the SGS organized a public lecture in association with the Geological Survey Open House in Saskatoon. This year we were very pleased to have Dr. Lisa Morgan, of the United States Geological Survey, who presented a talk entitled “Volcanism, Tectonism, Uplift, and Hydrothermal Activity on the Track of the Yellowstone Hot Spot: Past, Present, and Future” This talk was co-sponsored with the Saskatchewan Mining Association (SMA) and the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGGS).

### **Student Career Night (U of R)**

Student Career night at U of R was held on Wednesday, March 24th, 2010 at the University Club. Presentations were given by Kim Kreis (Petroleum Geological Consultant) and Ryan Morelli (Saskatchewan Geological Survey). Once again, this event was co-sponsored with the SMA and APEGGS.

Kate MacLachlan  
EOC Chair

## **CPSX Outreach Program**

The Centre for Planetary Science and Exploration (CPSX) at the University of Western Ontario (Western) was established in 2008. With over 50 faculty members from 10 different departments, and roughly 30 graduate students, the CPSX has become the largest academic centre in Canada for planetary science research. The goal of the CPSX is to make Western the focus for planetary science and exploration research in Canada and to establish Western as a leading university for space systems design. This will enable the training of highly qualified personnel and provide Canadian industry with the necessary expertise and potential partners in future planetary mission activities.

As a leading Canadian centre, the CPSX strives not only to produce high quality research and researchers, but also to ensure it can continue to do so in years to come. A 'grass-roots' approach is taken to cultivate scientific minds at all levels. Training is given to undergraduate and graduate students so they are capable of first-class research and are able to pass their knowledge to primary and secondary school students via various outreach activities.

### **Primary Objectives**

The vision of the CPSX is:

*"To strengthen and grow the Canadian space community through inspiring and training the next generation of scientists and engineers."*

The CPSX outreach program shares this vision and is guided by the following general objectives:

(PO.1) Encourage and inspire local elementary and secondary students to consider careers in science by engaging them in activities related to the planetary science and exploration research taking place at the CPSX.

(PO.2) Increase awareness of CPSX research in the local community.

(PO.3) Create a vibrant, research-intensive learning environment, which will attract high-caliber undergraduate and graduate students to Western.

(PO.4) Provide a service to the Canadian space community by hosting summer schools, courses, and workshops.

(PO.5) Develop clear leadership in planetary science and exploration research in Canada by developing interdisciplinary linkages between various faculties at Western.

### **Enabling Objectives**

Based on the above objectives, specific enabling objectives have been developed relating specifically to the activities of the CPSX outreach program. These include:

(PO.1)EO.1.1 Offer curriculum-based classroom programming relating to CPSX research.

EO.1.2 Offer primary and secondary student workshops relating to CPSX research.  
EO.1.3 Provide material to improve primary and secondary teacher knowledge on topics relating to space and planetary science & exploration.

(PO.2)EO.2.1 Offer events to highlight CPSX research and enable public participation.

EO.2.2 Communicate analogue and field activities to local communities.

EO.2.3 Inform the local media of public outreach events and activities.

EO.2.4 Maintain an up-to-date website, listing current events, research, and activities ([www.cpsx.uwo.ca](http://www.cpsx.uwo.ca))

(PO.3) EO.3.1 Offer outreach opportunities for graduate students, allowing them to improve their own teaching and public speaking skills.

EO.3.2 Offer additional training to those graduate students involved in outreach and education activities.

EO.3.3 Use outreach and learning activities to inform secondary school students about the space and planetary science opportunities at Western.

(PO.4)EO.4.1 Offer courses to improve the knowledge-base of space and planetary science related topics for teachers and students.

EO.4.2 Attend and host conferences to learn from, and promote to, other outreach centres, teachers, and students.

EO.4.3 Maintain a list of space-related opportunities available to Canadians.

(PO.5)EO.5.1 Introduce primary and secondary students to the interdisciplinary nature of planetary science.

EO.5.2 Liaise with various faculties at Western for outreach and educational activities (e.g. Education, Science, Engineering).

EO.5.3 Collaborate with on-campus clubs for activities related to space and planetary science & exploration.

### **Outreach Group Personnel and Structure**

The overall management of the CPSX outreach group is the following:

**Directors** The responsibility of the CPSX Director is to maintain the overall goals and objectives of the Centre within the outreach group. The Deputy Director is responsible for assisting with the overall group management. This includes managing the number of graduate students on behalf of the Departments of Earth Sciences and Physics and Astronomy, supporting the development of activities, and managing the budget of the group. Both will act as champions for the CPSX outreach program, and will meet regularly with Western administrators to inform them of the activities of the program and to solicit additional funding and in-kind support as needed.

**Outreach Coordinator** The Outreach Coordinator is responsible for the daily management and coordination of the group. This includes maintaining relationships with external partners and collaborators, procuring new contacts, development of new activities and programs, managing weekly tasks and responsibilities of the graduate students, resource management, keeping the Director and Deputy Director up-to-date on activities, writing and submitting grant applications, writing and distribution of documents and reports, and ensuring the goals of the group are being met.

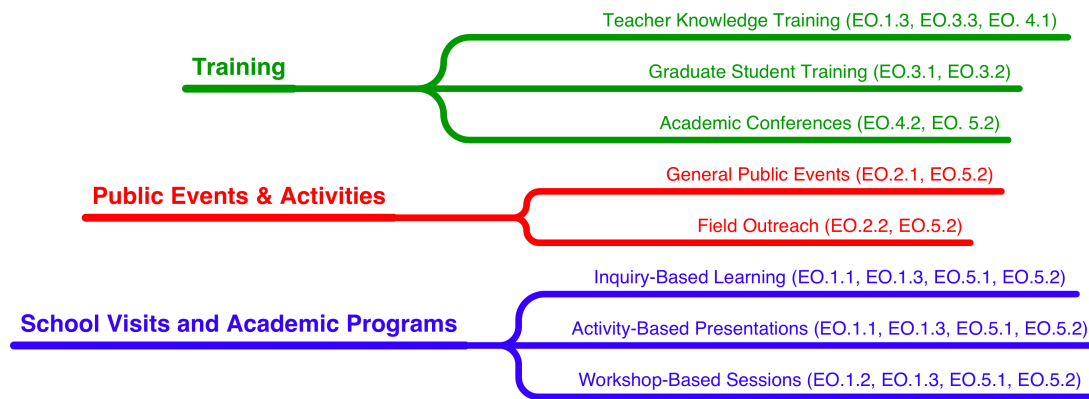
**Teaching Assistants** The number of hours allocated to each graduate student ranges between

a full-TA of 140 hours to a partial-TA of 70 hours. As a sample, graduate student responsibilities include:

1. Visiting schools
2. Conducting workshops
3. Inquiry-based activity development
4. Stand-alone presentation development
5. Special public events
6. Teacher workshop development
7. Presentations at conferences

### Outreach Programming

The programming offered by the CPSX can be divided into three broad categories: (1) Training, (2) Public Events & Activities, (3) School Visits and Academic Programs. The activities within these categories are designed to fulfill the above outlined enabling objectives.



**Training** Training activities are among the most critical activities of this program. This training refers to: (1) teacher training in planetary science (giving teacher ancillary knowledge and additional activities specific to planetary science), (2) graduate student training (preparing them for outreach and educational settings to share their knowledge; improve their teaching and presentation skills), (3) and conference attendance (to further the knowledge of the CPSX as a whole). Attendance at conferences allows the CPSX to stay up-to-date with teacher needs and outreach activity programming, and to also make contacts and expand the network.

**Public Events & Activities** These events emphasize Canadian planetary science to the public, and are sub-categorized into (1) general public events and (2) field outreach. The general public outreach events take place in London, Ontario, and the surrounding area, while the field outreach events are designed to inform local communities about the research being conducted in their area. All activities are carried out to increase the visibility of science in the community and to raise the profile of the CPSX.

### **School Visits and Academic Programs**

The academic activities relate to the Ontario curriculum (see Appendix A) and are developed with the support of the Thames Valley District School Board (TVDSB), the London District Catholic School Board (LDCSB). These programs are the largest and most popular activities offered by the CPSX. Three types of programming are available: (1) the higher profile inquiry-based learning activities, (2) hands-on activities, and (3) workshops.



Please visit [www.cpsx.uwo.ca/outreach](http://www.cpsx.uwo.ca/outreach) for a full listing of CPSX outreach programs.

### Reach of the Program

#### 2009-2010 Academic Year

Program Type	Audience	Number of Events	Numbers Reached
Teacher Training	K-12 Teachers	2	50
Public Events	General Public	1	30
Academic Programs	K-12 Students	2	220
	Total	5	300

#### 2010-2011 Academic Year

Program Type	Audience	Number of Events	Numbers Reached
Teacher Training	K-12 Teachers	3	90
Public Events	General Public	9	292
Academic Programs	K-12 Students	27	1345
	Total	39	1727

### Contact Information

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[www.cpsx.uwo.ca/outreach](http://www.cpsx.uwo.ca/outreach)



**CGEN  
YUKON REGIONAL CHAPTER  
ANNUAL UPDATE, 2011**

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**Yukon Geological Survey Activities**

Contact: Sarah Laxton  
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867-393-71876

*Mining Week*

Exploration Camp May 13-14  
Presentation “Our Jobs Rock”  
Public and school tour of the Whitehorse Copper Belt

*Women in Trades and Technology*

Careers in Earth Science presentation  
Hands-on exercise exploring for minerals using cakes

*Permafrost Outreach Program*

Frost tubes located at schools throughout the territory  
Annual visits to meet with classes involved with program  
Collaboration with Dr. Yoshikawa, University of Alaska Fairbanks

*Public Talks*

Various Earth Science topics at Beringia Centre, Kluane Parks Canada  
Centre

*School activities*

Copper Belt tours  
High school Surficial Geology field trip