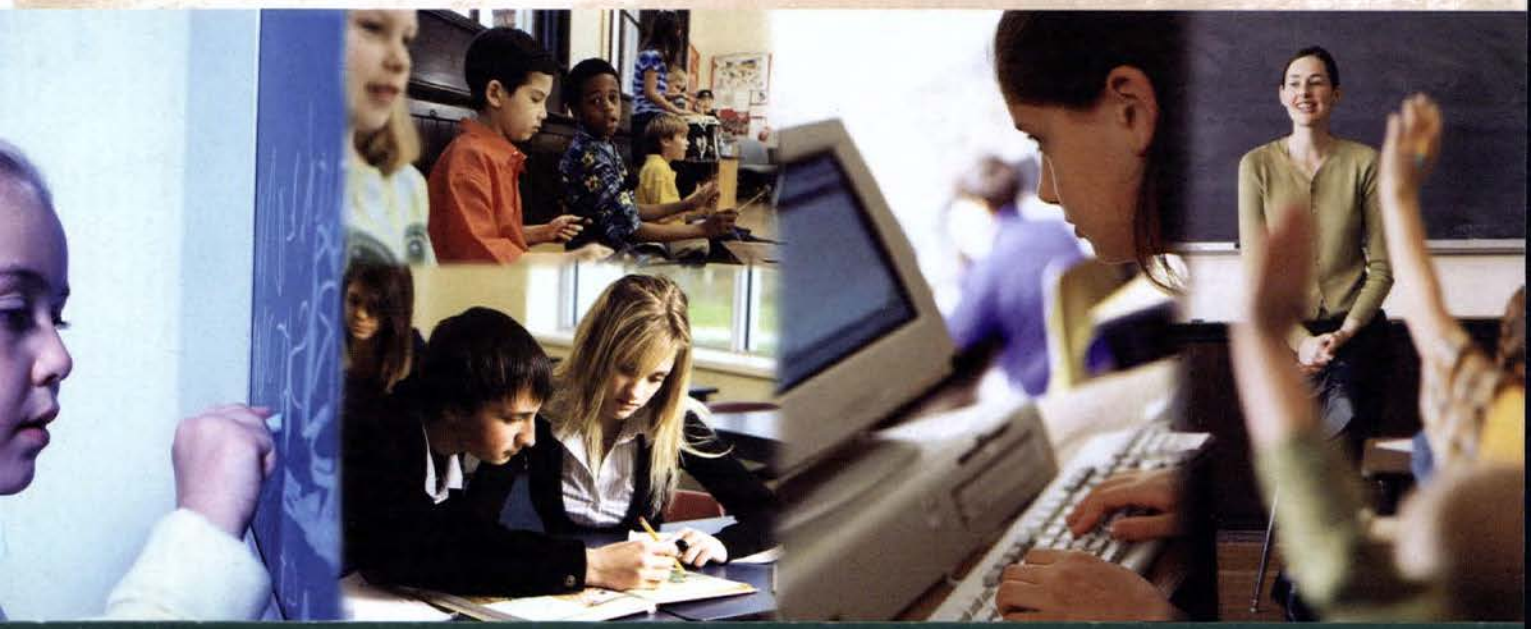
Government of Canada | Gouvernement du Canada

PRIME MINISTER'S AWARDS

For Teaching Excellence

Exemplary Practices 2008



For additional copies of this publication, please contact:

Publishing and Depository Services
Public Works and Government Services Canada
Ottawa ON K1A 0S5

Tel. (toll-free): 1-800-635-7943 (Canada and U.S.)
Tel. (local): 613-941-5995
TTY: 1-800-465-7735
Fax (toll-free): 1-800-565-7757 (Canada and U.S.)
Fax (local): 613-954-5779
Email: **publications@pwgsc.gc.ca**
Website: **www.publications.gc.ca**

This publication is available upon request in accessible formats.

Contact:
Multimedia Services Section
Communications and Marketing Branch
Industry Canada
Room 264D, West Tower
235 Queen Street
Ottawa ON K1A 0H5

Tel.: 613-948-1554
Fax: 613-947-7155
Email: **multimedia.production@ic.gc.ca**
This publication is also available online at **www.pma.gc.ca**.

Cat. No. Iu1-2/2008E
ISBN 978-1-100-11708-9
60558

Aussi offert en français sous le titre *Prix du Premier ministre pour pour l'excellence dans l'enseignement pratiques exemplaires 2008*.

Printed on recycled paper:
Cover: 50%
Inside pages: 10%

INTRODUCTION — YOUR RESOURCE

Welcome to your Exemplary Practices resource for Teaching Excellence brought to you by the Prime Minister's Awards program (PMA). Within these pages, you will be introduced to extraordinary teachers who represent some of the best in the field from across the country.

This booklet is one small part of a much larger project featuring practical information, tools and resources available on the Prime Minister's Award website. There you will find additional tools and resources and links to ongoing research and strategies in the field. This booklet is designed to whet your appetite and introduce innovative ideas and proven successful strategies from the 2008 Teaching Excellence award winners.

The content of the booklet is divided as follows:

- ***Biographies;***
- ***Feature Articles; and***
- ***Collective Wisdom***

The Exemplary Practices booklet is both a tribute to the 2008 PMA recipients and part of their legacy designed to further what they have experienced by sharing their knowledge and experience with others.

We all remember a teacher who had a profound influence on us. The 2008 PMA recipients are such teachers. They are innovators in the classroom who deliver and explore new and dynamic methods for teaching curriculum. They excite and inspire their students, helping them with career and life choices. They stand as role models for their students and as mentors and guides for colleagues and student teachers. Their doors are always open.

The ideas and concepts highlighted here are further detailed on the PMA Web site: ***www.pma.gc.ca*** . Please regard this content as a personal resource that supports the exemplary work being done in the teaching field in Canada.

ABOUT THE PRIME MINISTER'S AWARDS FOR TEACHING EXCELLENCE

The Prime Minister's Awards (PMA) for Teaching Excellence program honours outstanding and innovative elementary and secondary school teachers in all disciplines who instill in their students a love of learning and use information and communications technologies to better equip them with the skills to build a successful future. The 2008 awards were administered by Industry Canada on behalf of the Prime Minister and in partnership with Microsoft Canada, Petro-Canada, RBC Foundation and Research In Motion.

The education stakeholders from across Canada who make up the national and regional selection committees look for evidence that teachers achieve outstanding results with students, inspire them to learn and continue learning, use information and communications technology in the classroom and equip them with the knowledge, attitudes, and abilities they need to succeed in our changing society and knowledge-based economy.

Teachers may receive one of two awards: the Certificate of Excellence and the Certificate of Achievement. All recipients receive a certificate signed by the Prime Minister. In addition, each recipient's school receives a cash award to be used under the recipient's direction and a certificate recognizing its support of and contribution to the teacher's achievement.

Certificate of Excellence recipients travel to Ottawa where they participate in best practice sessions, and receive their award at a national event. Certificate of Achievement recipients are honoured at local events involving supervisors, colleagues, and local Members of Parliament or local leaders, as appropriate.

For more information about the program, please visit our website at ***www.pma.gc.ca***, send an e-mail to ***pmate-ppmee@gc.ca*** or call 613-946-0651.

All written correspondence should be addressed to:

Prime Minister's Awards for Teaching Excellence
Industry Canada
20th Floor
300 Slater Street
Ottawa ON K1A 0C8

CONTENTS – EXEMPLARY PRACTICES

BIOGRAPHIES

FEATURE ARTICLES

COLLECTIVE WISDOM

PMA PROGRAM PARTNERS

BIOGRAPHIES

Meet the Prime Minister Award Winners for Teaching Excellence (Full biographies are posted on the PMA Web site: ***www.pma.gc.ca***)

BRITISH COLUMBIA

MURRAY BULGER
Argyle Secondary School
North Vancouver, BC
Teaches New Media in Grades 11 and 12.

JOHN HARRIS
Lochiel U-Connect Education Centre Langley, BC
Teaches Science and Technology, Social Studies and Music in Grades 2 to 9.

ANGELA MAGON
Queen Margaret's School
Duncan, BC
Teaches Chemistry and Mathematics in Grades 11 and 12.

DEVON ROSS
Vancouver Technical Secondary School Vancouver, BC
Teaches Science in Grade 9, and Chemistry and Geology in Grade 12.

TERENCE YOUNG
St. Michaels University School
Victoria, BC
Teaches English, Creative Writing and English Literature in Grades 10 and 12.

ALBERTA

ANGELEEN MUSYJ
Rendell Park Elementary School
Lloydminster, AB
Teaches Kindergarten

NUNAVUT

SHANNON MCCARTHY
Rachel Arngnammaktiq Elementary School
Baker Lake, NU
Teaches Kindergarten

SASKATCHEWAN

MILISSA GAVEL
Davison School
Melville, SK
Teaches Math, Technology, Social Studies, Language Arts and Health in Grades 4 to 6.

MANITOBA

MELANIE GERTLEY
West Kildonan Collegiate
Winnipeg, MB
Teaches Science, Biology and Chemistry in Grades 10 to 12.

ONTARIO

CHERYL CARR
Dr. Norman Bethune Collegiate Institute
Scarborough, ON
Teaches Canadian Geography in Grade 9 and World Issues in Grade 12.

DAVID MOFFATT
Hillfield Strathallan College
Hamilton, ON
Teaches Biology in Grades 11 and 12, Science Department Chair.

QUEBEC

ANNE GUAY
École Saint-Clément — Édifice Ouest
Mont-Royal, Quebec
Teaches Regular Grade 1 class.

JEAN-PIERRE LAGUEUX
Polyvalente Bélanger
Saint-Martin, Quebec

and

CHRISTIAN LAGUEUX
Polyvalente de Saint-Georges
Saint-Georges, Quebec
Teach History of Quebec and Canada in Secondary 4.

NEW BRUNSWICK

IAN FOGARTY
Riverview High School
Riverview, NB
Teaches Chemistry and Physics in Grades 11 and 12.

NEWFOUNDLAND AND LABRADOR

JEAN MURPHY
Long Range Academy
Cow Head, NL
Teaches Numeracy in K-6, Math in 7-9 and Technology in Grade 7.

FEATURE ARTICLES

When the PMA Winners for Teaching Excellence were brought to Ottawa in May 2008, it wasn't only to receive their well-deserved awards, they were brought there to work, to share information and complete hands-on tasks.

First, all recipients were asked to make a short presentation on an area of teaching that represented a specific passion. The feature articles are based on those presentations. Next, they participated in a visioning exercise in which they were asked to create the ideal school environment for the 21st century.

TEACHING IN THE 21ST CENTURY

Prior to their arrival in Ottawa, Ontario the PMA recipients were asked, "How would you instill a love of learning in the 21st century?"

The answers recipients put forward covered everything from what schools in the future should look like to the tools used and curriculum taught.

Physical space in the 21st century needs to be versatile, flexible and modular with a lot of natural light and calming colours. The space should accommodate team teaching and different sized groups. Some recipients envisioned a community-based K-12 school that included pods for a high school, an elementary school and a daycare. This school also included common areas where staff and students could meet, mingle and share ideas and information.

21st century schools are environmentally friendly, energy efficient and make good use of outdoor space incorporating a food garden, a natural garden and a space or sense garden. The food garden would supply the cafeteria and technologies like geo-thermal heating would supply the school's energy needs. Exhibit space and galleries are an important feature where student work is displayed acknowledging that public recognition is important.

Technology will be ubiquitous in the 21st century but it shouldn't replace one-on-one teacher-student interaction - rather, it should enhance it. Anytime, anywhere learning will be key, featuring a wireless Internet network accessible from everywhere in the facility. One-to-one tools for students and wireless devices for teacher use such as projectors, Whiteboards and Tablet PCs are common. 21st century learning embraces a school without walls focusing

on collaborative projects with educators and schools from around the world using tools like Skype, Webcams and simultaneous Webcasts.

The 21st century teaching and learning schedule incorporates theme weeks or days such as a Language or Environment day. Teachers will have ample release time so they may collaborate, plan and share ideas with colleagues, implement community service projects, business partnerships and focus on meaningful assessment and evaluation of student work. Changing up a school schedule might be messy and disruptive, but ultimately, it would be extremely rewarding.

21st century learning demands openness and flexibility. As one teacher team quipped, "One of the ideas we came up with for the ideal 21st century school was a stone bench outside the Parthenon where absolutely nothing is cast in stone…except the bench."

DEFINING PASSION

David Moffat teaches biology at Hillfield Strathallan College in Hamilton, Ontario. When he thought about the good and really great teachers he'd experienced in the past, he tried to figure out what set apart those who were great. "What comes up over and over again," he says, "is that it comes down to passion."

"What comes up over and over again," he says, " is that it comes down to passion."

David Moffat

Being a scientist and examining concepts clinically, Moffat has been able to define three categories of passion in teachers. There are those teachers who have an abiding passion for their discipline and they are true academics. Then there are those teachers who are what he calls the "Renaissance type"- teachers with a pure passion for learning in all its forms. Finally, there are the "people persons", those who are passionate about the people around them and with whom they work and teach.

Says Moffat, "I realized that many of the good teachers who taught me, had one of those three passions and I learned to respect them for what they were passionate about." Further, he found that the really great teachers had at least two of those passions working for them. And the types of passions can work in a range of combinations.

Moffat categorizes himself as being passionate about learning and about his discipline (a combination of the first two types). "I'd probably be a hermit in a cave if life didn't force me to be involved with humans," he quips, but he works hard on his weaker points as all good teachers do. "My students are searching for meaning, and when they see that my passion informs my life and instills meaning in it, they are eager to share it."

So where does all of this passion lead? To begin with, it forced Moffat to think about the role of passion in creating what is required to have great schools. His conclusion is simply to stock them with great teachers, to have schools where administrators "build teams of people who have at least one of the passions above, but build them in such a way that they're collegial and that anybody can pursue their passion with support from colleagues.

This sets teachers free to pursue their passions, and gives students a variety of models to follow," he says. Great teachers, Moffat feels, working within great schools will infect students with their passions. In that way, great learning will take place.

CHANNELING CHALLENGE

Most would think that rock climbing, rappelling and sea kayaking would be challenging enough for the average student. But for Ian Fogarty, who teaches high school chemistry and physics at Riverview High School in Riverview, New Brunswick, it is just the beginning. "My students don't like me very much," he claims, "because I challenge them." But there is a difference, Fogarty insists between making school hard and making it challenging. The difference is providing the right stimulation where students are engaged.

Fogarty runs three programs that embed the concept of challenge in his teaching and student learning. They consist of an outdoor program called appropriately, the Cape Challenge, in-class puzzles and a 'weird idea' called Grand Projects. All are designed with the same set purpose: challenge.

In class, Fogarty designs 'puzzles and wonder'. "Trying to find a puzzle for each individual kid is tough, trying to find a puzzle that's difficult enough but not too challenging is the fine art of teaching," he says. So, he continues, "We do some really cool things like jumping off diving boards into a pool with an underwater video camera for measuring forces. We measure the speed of sound using GPS (Global Positioning System) and Probeware. We do gravity experiments where we drop candles and videotape them to see how they change. We go to a play park with elementary school kids and do physics and chemistry." The puzzles require teamwork. Fogarty believes Harry Wong's (author of The First Day of School: how to be an effective teacher) thesis that learning is an individual activity but not necessarily a solitary one, so his students work in teams and groups, which in itself, is a valuable learning experience.

The Cape Challenge is an outdoor adventure program where students learn character development through rock climbing, rappelling, sea kayaking, and obstacle courses. "It is a challenge for the body, soul and mind," says Fogarty. His students say he 'pushed them off a cliff' but he maintains that if they can jump off a 180-foot cliff, then they can certainly do a Physics class. Finally, the Grand Project gives students a chance to build character, solve puzzles and showcase their abilities in a program that is an alternative to the standard science fair. The projects are teacher-mentored. Students pick a topic of interest and every science student is required to do one. Students work on their projects at lunch, after school and/or weekends. No class time is allotted. The range of projects is astonishing, from astro-photography, biotechnology, bird watching, cancer, computer modeling, a chemistry road show and a myriad of field trips.

But perhaps most importantly, Fogarty's students have learned to challenge themselves and developed the skills they need to handle just about anything life might throw at them. Challenge, it seems, has its rewards.

"Trying to find a puzzle that's difficult enough but not too challenging is the fine art of teaching."

Ian Fogarty

BECOMING AN ECO-SCHOOL

" I'm a big advocate for changing the culture in a school to help it become much more environmental and sustainable."

Cheryl Carr

How does an entire school go green? Cheryl Carr who teaches grade nine Geography and grade 12 World Issues has the answer. Jump on the Eco-School program. "I'm a big advocate for changing the culture in a school to help it become much more environmental and sustainable," she says. Carr teaches at Dr. Norman Bethune Collegiate Institute in Toronto, Ontario--a school with a population of 1300 and a large ESL enrollment from mainland China.

The Eco-School program has been such a success since it began six years ago that now almost 10 percent of the student body is an active participant and it has attained a gold certification status. The transformation began with the creation of the Bethune Environmental Action Team (BEAT) now one of the cool clubs for students to join.

BEAT has become infused into the fabric of the school, but this doesn't happen on its own. According to Carr, "You have to build it, it has to be a team. We met with everyone, the caretakers, principals, secretarial staff, school advisory council to try and change the eco-culture of the school." BEAT has a student executive that drives the entire program under the guidance of the teacher advisors. The executive chooses the committees they want to run. There are three committees that meet in separate classrooms, waste reduction and energy, spirit and sales and feeder schools. The school also has a large, naturalized area and the entire membership is responsible for its maintenance.

The first major challenge for BEAT was the school recycling program. To collect recyclables students placed modified Rubbermaid garbage bins beside every garbage can in the school. Students help out caretaking staff by picking up the recycling in the classrooms and opened their own recycling centre. In addition to collecting items such as corks, eye glasses and pop tabs, the centre generates some cash through recycling objects like printer cartridges where a large box fetches between $100-150 in rebates. The school has also reduced photocopying costs by roughly 10 percent. The additional dollars can be applied to other programs, such as the purchase of computers, textbooks, and bike racks among other things.

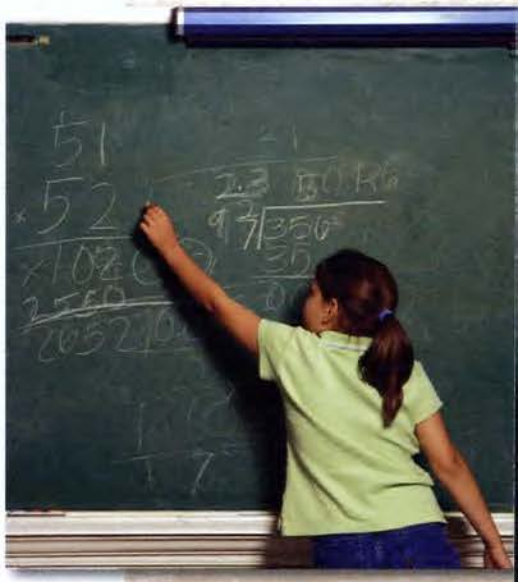
Energy conservation is another large initiative and the Energy Conservation Police (BEAT members) ensure that lights are turned off, computers powered down and politely remind parents not to idle when dropping off or picking up their children. BEAT has developed outreach programs to feeder schools in the area educating younger students who will attend Norman Bethune with an environmental outlook and readiness. This way, the program becomes self-sustaining.

Communication and cooperation are essential elements to the success of the program where all staff, students and parents are brought onside. BEAT plans and runs a number of fun events during the year such as Waste Reduction Week. Other school departments have jumped on the BEAT bandwagon too. The music department participated in fundraising by donating money raised from their concerts and the art department decorates garbage cans each year. In these ways, BEAT has become an integral part of the school's culture.

"Probably the most important thing is to make it fun," says Carr. "Recycling is not a very exciting thing to do so we have lots of fun and lots of activities." The way Carr sees it, the students will thank you, the school will thank you and the planet will thank you too.

I AM ROOM 4

Students 'feel' math in Jean Murphy's classroom. She has tons of manipulatives, motivational posters, a word wall, games, learning centres, group worktables, a computer centre and much more. Murphy teaches grade 7-9 Mathematics at Long Range Academy in Cow Head, Newfoundland, a K-12 school. "When you walk into my classroom," she says, "you see, you think, you feel math."



Creating a warm classroom atmosphere, Murphy contends, emanates out of respect. Respect that students have for her and the same that she has for them. "(My classroom) "is a place where students have to feel safe enough to take risks and ask questions," she says. Murphy encourages her students to make mistakes, "I encourage them to falter because when they do, they learn, they learn to fix it. They're not going to go through life without making a mistake. It's no big deal. You fix it as you go through."

Along with mutual respect and risk-taking comes encouragement and praise. Murphy believes in offering continual encouragement because students respond to positive comments but the praise must be sincere. "We really have to mean what we say," she says. "They pick up on it."

And while that's all great, Murphy adds that "if the students aren't coming in to engage in learning then I've done all of that for nothing." In Murphy's class, students engage in the process of learning and have input into what goes on in the classroom. Student learning comes in all forms, auditory, visual, hands-on etc. "We develop new ideas through discussions, charts and activities. I always tell them there's more than one way to do math."

Furthermore, at the end of the year, after an enormous amount of work has been completed, Murphy asks her students how things can be improved. "I took what they said seriously," she says. "I did what they told me to do and I'm always saying, how can we make that better?" And as a result, from one year to the next, test scores go up.

Success, for Murphy, isn't about test scores, however, it is about relationships. "We've got to remain student-centered because the child is the focus, caring is the key and good teaching comes from the heart," she says.

CONNECTING WITH PARENTS STARTS EARLY

Angeleen Musyj teaches kindergarten at Rendell Park Elementary School in Lloydminster, Alberta and she likes to make connections early. So early, in fact, she provides outreach to students and their parents before they start kindergarten. "I hold a pre-kindergarten literacy workshop," she says. "It helps me establish a relationship with parents before the children are even in the school."

Musyj invites all the pre-registered kindergarten students and their parents to a literacy evening in May. She sets up a variety of workstations around the school gym and the incoming students and their parents work on the activities together. In January, another literacy evening takes place where the new kindergarten students and their parents return for a literacy workshop and work on higher-level activities together. At the end of the evening, each student receives a literacy kit, essentially a shoebox full of activities that parents and children can do together at home. "It connects me with the parents," says Musyj. "It's a great vehicle for communicating."

"It helps me establish a relationship with parents before the children are even in the school."

Angeleen Musyj

To further the connection, she also provides a school-home links program that consists of a weekly five-minute activity based on reading readiness. "It allows parents to have a guiding role in their child's education," she says. One of the kit's components consists of letter magnets where kids can spell their names and simple words.

Technology plays a role in fostering parent communications. On the school website are password-protected pages of the kindergarten class. Pictures are posted and parents can log on and see what is going on. In addition, Ms. Musyj has created a series of audio podcasts. Children listen to themselves from home and share what they've done in school with their parents. Parents may also leave comments in the blog section of the site.

Future projects to enhance early literacy include themed backpacks that students can take home and work on activities with parents, incorporating an interactive whiteboard into classroom instruction and take-home reading audio podcasts. The idea is to have children take home a book, then log on to the podcast and read along with her. "I think the kids would just love to be reading with their teacher and then you can give them little messages like, make sure you do your chores, and brush your teeth before you go to bed," she says.

In Ms. Musyj's class, parents are given innovative access to their children's learning from the very beginning of their school career.

KINDER ATII

Baker Lake, Nunavut is a small Inuit community north of Winnipeg that is the geographical centre of Canada and is home to 1700 people. It is a fly-in community that often gets socked in during a blizzard. Warm is -10C.

" The lessons learned before a child enters formal school are quite possibly the most important she or he will ever learn."

Shannon McCarthy

Rachel Arngnammaktiq Elementary School serves Baker Lake through its mandate of creating a partnership between students, parents and the community. Shannon McCarthy is the kindergarten teacher and she lives and works within the Inuit culture. She recognizes the important influence of family on child development. "I feel that parents are a child's first teacher," she says. "The lessons learned before a child enters formal school are quite possibly the most important she or he will ever learn."

Kinder Atii means getting ready for kindergarten. Like Angie Musyj, McCarthy believes in making connections early on. She realized that a comprehensive pre-kindergarten program would serve her community ably. "Parents are not always aware of the expectations of the kindergarten classroom prior to their children entering school. Sometimes school can be a scary place not only for the children but the parents as well," she says. The Kinder Atii program helps both parents and children transition to kindergarten and children come equipped with school readiness skills.

Pre-kindergarten children and their parents attend eight one-hour sessions throughout the year. They come in for an hour and McCarthy runs four sessions on that day split between roughly 50 children and their parents. Children are introduced to the structure and routine of the class as well as games, songs and stories. Music plays a large role in McCarthy's classroom. Like Jean Murphy, she works to create a secure environment for children and parents. After each session, parents are given a book and over the course of the year, eight books enter the household for parents and children to read. She also sends home a calendar at the end of each month with activities to be completed and if it is brought back to the next session, children get to pick a prize from the class treasure chest. Activities sent home are bilingual, in English and Inuktituk. Parents are welcome for the

first five sessions. The remaining sessions, the children stay on their own while the parents go off with the student support teacher to discuss topics like literacy, numeracy and school expectations.

The program is relatively new but already it is fast becoming a standard in Baker Lake. When children come into kindergarten, McCarthy already knows them and their capabilities. The children are familiar with the school and the class so the transition is much smoother. "Parents who have had a child in Kinder Atii no longer feel that school is a scary place, they feel connected to their child's education in a real way," she says.

SETTING THE BAR HIGH

Devon Ross teaches Science 10, Chemistry and Geology 12 at Vancouver Technical Secondary School (Van Tech). Her students have achieved success in each of the disciplines she teaches. Here's why.

In Chemistry, Ross sees 200 students every other day. She encourages a strong work ethic in her students. "I set the bar high and even students who are in a challenging situation can still be successful in the Chemistry 12 course," she says. She attributes that success to a number of factors. Ross and her teaching partner have created strong relationships between students and teachers. They promote the notion that all can be successful and spend a great deal of time helping students after hours.

"I set the bar high and even students who are in a challenging situation can still be successful in the Chemistry 12 course."

Devon Ross

A culture of high expectations has been created in the course. Daily quizzes reinforce previous lessons and encourage students to maintain their course work. If a student struggles, it is addressed immediately. Additional help is available through an online discussion tool found at ***www.nicenet.org*** where students can ask questions while they're doing work at home and get the answers they need from Ross and their peers.

In the early part of the millennium, Van Tech had never hosted a science fair. Now, it hosts one of the largest science fairs in the country with 600 projects annually. Every science student in the school is required to develop a science fair project every year for five years. It demands that teachers and students make a significant commitment in terms of time and effort for it to work. As a result, students have won gold and silver medals at the regional level, have gone on to the Canada-wide competition and have even competed at the international level. Students have had their work published in journals and won scholarships to university. Students gain technical knowledge and skills and have access to resources and help them build a science community within the school while connecting with others through the competitions.

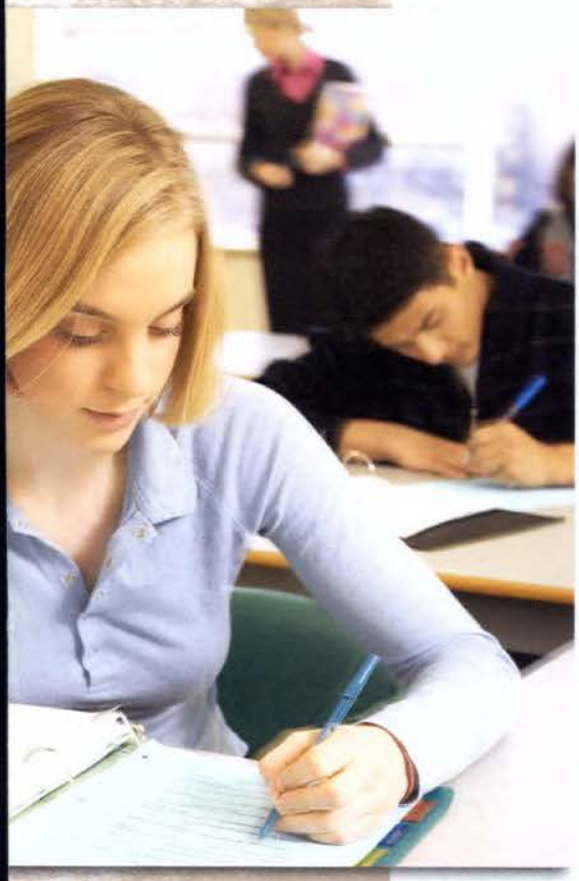
Finally, Ross noticed that the existing science curriculum favoured students who were academically strong in those disciplines. She wanted to reach students at all levels and proposed establishing a Geology 12 course and an Adapted Science 10 class that would be filled with field experiences, hands-on learning and project work. Funding, however, was a serious issue. However, community partnerships were formed and grant money was accessed so every student can afford the course field experiences. In Geology 12, the trip consists of five days travel through British Columbia and Alberta culminating at the Royal Tyrrell Dinosaur Museum in Drumheller. Students

see the limestone cliffs of Athabasca Falls and the hot springs at the Cave and Basin National Park. "Now they could say they had made snow angels on a flowing river of ice on the Athabasca Glacier," Ross concludes.

WRITERS WRITE, DON'T THEY?

In teaching high school English, there is often a tension between theory and practice. In earlier years, as they learn the joy of reading, students are excited and enthralled by stories. Is there a danger, however, of high school students tuning out when they are taught the theoretical aspects of English such as irony, metaphor, symbol and theme?

"What I discovered," says Terence Young who teaches grades 10-12 English, English Literature and Creative Writing at St. Michaels University School in Victoria, British Columbia "is that students really liked to write their own material. They were most happy when they were handing in a poem or a short story or some sort of creative work they had invested themselves in."



Roughly 20 years ago, Young asked his principal if he could start a writing class. The principal replied that if he could get kids to sign up, they'd put it in the timetable. "What they wrote astonished me," says Young. "I was not prepared for the intensity of their feeling or their ability with language." Knowing he was on to something, he and a teaching colleague launched a literary magazine that features young writers from across the country and even, around the world. By knocking on doors of private industry, they secured enough funding to launch The Claremont Review (***www.theclaremontreview.ca***), the name of Young's former high school.

So what is the secret to inspiring teenagers to write from the soul? Part of it comes as a result of exposure to working writers who visit Young's classroom. Young is himself a published writer who has been short listed for The Governor General's Award and won a book prize from the city of Victoria. He can speak with authority and apply his own writing skills to the classroom. "I don't really believe that I teach so much as I simply model. I believe that the students are great mimics. If you say, this is a model of what is good in writing or what is good in poetry, then they will often say, why didn't you say so? I can do that. I've learned with creative writing that the best teacher is the poem itself or the poet," he says.

Some of the models Young uses are Robert Pinsky's poem *The Shirt* or Wallace Steven's *13 Ways of Looking at a BlackBird*. Like all good writing, they show but do not tell. "If you give that to students and you say, okay, this is Robert Pinsky, he has shown you a simple item in his life. Have you got something? What have you got?" Then students go away and eventually come back with something that Young feels is "simply astonishing, convincing, powerful and true".

A CLASSROOM OF CRITICS

Literary criticism is a long established discipline, one that is important when it comes to critically analyzing our cultural norms and values. That's the way it works in the adult world. But what happens when the literary critics are only six-years old? Anne Guay, who teaches grade one at Saint-Clément Primary School in Mont-Royal, Quebec endeavors to ignite a passion for literature at a very early age, just as children are beginning formal schooling.

Mrs. Guay's approach to teaching reading and writing is comprehensive and multi-faceted.

At the beginning of the school year, students are not given any books. Mrs. Guay asks her students to bring a book from home that links what they will learn in school and what they already know. This exercise enables children to discuss their interests with each other and the content of the books they present.

At each stage during the year, the group studies a different literary genre. Students learn the vocabulary for each. Every week specific periods are devoted to reading. For three periods each week, students are taught reading strategies that involve decoding, interpreting whole words and understanding the meaning of text through images and context. They are taught in groups and the strategies are adapted to each student's needs. Mrs. Guay works in collaboration with her colleagues teaching students in a way that is adapted to their reading level.

One period each week is allocated for learning to anticipate or react to different literary texts. During another period students select the books they intend to read. The structure of the class also includes monthly visits to the municipal library, in the company of parent volunteers. The pupils familiarize themselves with various sections of the municipal library connected to the literary genres studied in class. They also get to know the employees of the library and understand what they do.

When students in Mrs. Guay's class are learning to write, the start point is the computer keyboard using Microsoft Word. From there they progress to using image creation software, called Lopart. It allows the students to send images and postcards by email to their parents.

Students also take part in special activities that aim to develop their capacity to read and understand. The activities include the "dodo de Noël", "parcours littéraire" or an open house for parents. Students are always encouraged to read, to express themselves and to explain what they have understood. Each child has a portfolio documenting their progress. It is a tool that Mrs. Guay presents to parents as part of each child's evaluation.

Moreover, a collaboration that Anne Guay established with Les Éditions Québec Amérique Jeunesse--a Quebec-based book publisher—exposes students to literary criticism. Students participate in the reading and critiquing of real manuscripts prior to publication. By taking part in the reading and the criticism of manuscripts before their publication, these young children become part of the publishing process. As a result, Ms. Guay is helping to create a generation of young readers and writers who share her passion for literature.

YES, I CAN LOVE SCIENCE AND MATH

How do you design a science and math program that will engage the interests of young girls? It helps if you teach in an all-girl environment like Angela Magon who teaches Grade 11-12 Chemistry and Math at Queen Margaret's School, in Duncan, British Columbia. Research shows that the brains of men and women are different and given the same tasks, the way information is processed is completely different.

When she was hired as science department head in the 2005-2006 academic year, Magon discovered the achievement results for the department were flagging. Based on the research she had done, Magon had a good idea of what she wanted to do with the science program. For example, "Self-confidence in girls is huge. You take a girl that's getting A's and B's in math and science and you say 'you should go into the sciences' and they'll say, 'no, I'm not good enough' and they really believe it." To be encouraging in the way one teaches is important. Girls respond to good eye contact and Magon feels this helps to develop a personal relationship with students.

In practical terms, teaching approaches consist of covering topics like absorbency and density, not the most scintillating subjects, but Magon will use tampons as an example then segues into topics such as toxic shock. That gets her students' attention. She uses music, singing chemistry tunes such as The Elements Song by Tom Lehrer and others. Magon bakes cookies with her class, but it's done using chemical formulas and students are required to do conversions and calculations. She brings in a wide range of guest speakers particularly women working in the sciences. She conducts a lot of demonstrations. "I believe in a demo a day without fail. If I'm not doing a demo a day, I'm not doing my job and I feel guilty," she says.

And it is clear from the fiery demos and solving puzzles that fun is considered an integral aspect of science in Magon's class. She'll use card tricks to teach mathematics. When they go through a demonstration and work together, it's all about bonding, she says, huddling in groups to make something happen. All of which is part of the experience. This includes field trips, one in particular, where the class spends a week on the west coast doing marine biology. "They go out in boats. They do real science," she says.

Much of her efforts focus on confidence building. Magon noticed that the transition from grade seven to grade eight was problematic. Queen Margaret's has a co-ed K-7 junior school and a number of the girls were concerned about switching to an all-girl environment. Magon suggested a program where incoming grade eight girls spend an entire day with the senior students, where they especially focus on science. The senior girls mentor the younger ones, show them what they do in a typical day, teach lab experiments and in effect, become the teacher. As a result the transition rate has improved dramatically. Not only that. Since the introduction of her girl-focused approach, the achievement statistics are enviable. Ninety percent of the grade 12 students take science when it is an optional subject in British Columbia. Over 50 percent of these students take two or more sciences and in 2008, 60 percent of the graduating class chose to enter a science-related career. Positive modeling and attitude counts for a lot and shows that yes, girls can love and excel at science and math if these are taught in an appealing way.

MAKING SCIENCE REAL

Melanie Gertley teaches Science, Biology and Chemistry for grades 10-12 at West Kildonan Collegiate in Winnipeg. One day, she found herself subbing in for an English teacher whose class was studying Hamlet. "English was the bane of my existence," Gertley says. "I didn't understand Hamlet the first time around, " But what she did know was science.

As it turned out, the students were working on the final scene of Hamlet; the death scene. In other words, blood and gore. Using her science noggin, Gertley asked, "Why don't we recreate this but we'll do it CSI style?" Each student developed a psychological profile for each of the major characters. "Because I knew nothing of Hamlet, they had to use the text of the play to justify their psychological profiles," Gertley says. What followed then was a reenactment that involved bringing in teachers and students to process as if it were a real crime scene. For example, the character of Claudius uses poison so students had to research what type of poison he might have used. Even blood spatter was recreated. Like the characters on the television series, students sprayed and processed the scene.

"English was the bane of my existence," Gertley says. "I didn't understand Hamlet the first time around."

Melanie Gertley

Gertley's students also study gas laws through a scuba diving project. This project is also modeled in Blitz 3D so the experiments can be manipulated digitally on computer. Another project is called The Big Dig, where an archaeological dig site is created on the school grounds. Students select a time period and create all of their own artifacts out of clay. One student built an entire bison skeleton.

Gertley has also started a program for transitional students called the Seven Oaks Curriculum Cooperative. Five times per year, her senior students design lab experiments and teach them to transitional grade eight students to encourage their interest in science. Senior students also tour the junior schools in the area putting on mad science shows to spark interest. And there is another project on the go with Canadian Blood Services that encourages young people to donate blood. "Since the initiation of the program, student donations have gone up approximately fifty percent," Gertley says. Part of the program involves developing an advertising campaign. Three of the television ads students developed were so compelling, they will be part of the local TV campaign.

Gertley's programs have generated provincial and even, international recognition.

So Gertley suggests, ask a fundamental question like, Who is Hamlet? and the resulting answer may lead to significant science learning opportunities.

STUDENTS CONNECT THROUGH TECHNOLOGY

John Harris believes passionately in the integration of technology into expanding and enhancing learning. While teaching in the Langley, BC school district, he was tasked with starting a new school which became known as Lochiel U-Connect. This school has evolved into a stimulating learning environment that blends site-based face-to-face instruction with online home-learning while utilizing effective research proven ICT learning tools. The program grew and now has its own building and an enrollment of over 200 students with a waiting list.

One of the many ways Harris integrates technology into learning is through student generated 2D and 3D online simulations and games that are used to fulfill curricular objectives. For example, to support the issues of dwindling Pacific Coast Salmon stocks and fish farming, one team of students designed a complex digital salmon farm "business

simulator." Others built an online salmon dissection game that uses a virtual scalpel to systematically explore this species' internal bodily structure. A third group created a stream builder game with the goal of allowing the user to design a stream that will successfully support the hatch of the highest possible salmon population.

Also, in his quest to transition students from mere "consumers" of digital media to actual "creators" of interactive content, Harris encourages students to produce simulations using 3-D multiple user virtual environments. (e.g. "MUVEs") To enhance the learning and motivational potential of student generated immersive 3-D worlds, learners are taught a "taxonomy of interactivity." They are then encouraged to embed purposive high level interactions to support, for example, math and science outcomes as they construct a "live" shopping mall or create simulations of NASA's space based experiments. He has found that MUVEs are not only a valuable catalyst to the transference of learning from online settings to real world problems, but that they also allow students to investigate, he says, "experiments that are either too dangerous or too expensive to do in class."

One application that is currently being developed involves monitoring the personal health of students who wear an innovative wristband that observes movement, tracks heart rate changes and time stamps the readings. Student heart and motion data will, in turn, be used to set physical and conditioning goals, since heart rate is one key indicator of fitness progress. All of the data will be uploaded into a website along with a personalized recommended conditioning program. If a person's heart rate needs to be adjusted by taking on more exercise, they will be sent reminders through email or even through a cell phone. All of the data can also be integrated into a 3D virtual world that explores nutrition and health. If a person's fitness level improves, they will be rewarded with a flashier avatar that gives them more rights and privileges in the virtual world. It's "Second Life" for health.

Despite his interest in technology, Harris doesn't consider himself a "super geek." He started his career as a music teacher and still stages concerts at the school. "My overall goal was to blend online learning with face-to-face learning," he says. "I saw the wonderful potential of the new technology so I thought, why not have our cake and eat it too and have the best of both worlds?"

TECHNOLOGY...STRAIGHT FROM THE HEART

Self-directed learning is a large part of Murray Bulger's program at Argyle Secondary School in North Vancouver, BC. He teaches 14 different art and design courses using technology, everything from digital imaging to photography, sound recording, animation, film and television, graphic and Web design and so on. Bulger and two other teachers have 750 students running through their courses. To do the courses, students need to learn 12 different technology tools. To learn how to use the tools, Bulger and his team have created a series of self-help videos on DVD. Once the tools are mastered, actual learning takes place. Bulger likens the process to taking a driving test. Students are quizzed on their

place. Bulger likens the process to taking a driving test. Students are quizzed on their ability with each of the tools and must achieve a certain level of mastery before they can move on. "We've made these (DVDs) for almost all of the tools we use and they get past the tools efficiently and effectively so the tools get pushed aside in terms of what's really important," he says.

While the tools are important, what really matters is the project work itself. For example, Bulger's students have launched a youth culture magazine called 44 (named after school district 44). Teachers were only involved in guiding the process. The creative elements, the design, the content, were all student driven. There were some roadblocks. It took some time for the group to figure out the direction for the magazine and its message. They had to work as a team to come to a consensus. Then a member of the magazine team died suddenly in an accident and the students were devastated. They came together and decided to devote a section of the magazine to that student, a section that would reflect the light of her personality. "This was the first instance when they started to put heart into the magazine," Bulger says. "The magazine is about art, culture and music but they needed to realize they had to have heart in their magazine too."

The first issue of 44 was published and generated a lot of interest. It was profiled on a number of television programs, CBC Radio, and the magazine has been requested for review by a number of organizations including Masthead Magazine (the bible of the magazine industry) which is interested in doing a story. A number of students have won scholarships based on the work they've done with the magazine.

"What I really try and get kids to do, meaningful things, meaningful stories, to doing something that's personal and connects all the things that they are learning," Bulger says. "When you use technology meaningfully and profoundly, that's the key, whether it's science or art, it doesn't really matter to me as long as it's straight from the heart."

"What I really try and get kids to do, meaningful things, meaningful stories, to doing something that's personal and connects all the things that they are learning."

Murray Bulger

WHOLE SCHOOL MENTORING

Peer mentoring is an established methodology that has shown proven results in schools across the country. It is unusual, however, to mentor the entire professional staff of one school. Milissa Gavel, who teaches at Davison School in Melville, Saskatchewan, took the bull by the horns when she recognized the benefits of successful integration of technology into teaching and learning. She also knew that she could help her colleagues improve their skill levels. "Because teachers had limited computer skills themselves, they often felt uncomfortable and lacked confidence when using computers. As a result, computers were used primarily for basic skills such as typing, drill and practice, games, word processing and surfing the Internet," she says. Gavel knew that they were just scratching the surface in terms of the learning applications that technology supports.

So what to do? She put together a long-term plan. The plan began with mentoring everyone until they were comfortable. "Last year, I worked with 13 teachers in my school to integrate SMART board technology into their regular classroom practices. I spent three weeks working with each teacher in their own classroom using a situational peer mentoring process," she says. This involved modeling lessons, helping teachers develop multimedia resources that connected to what they were teaching in the curriculum and by the end of the first year, teachers reported a 40 percent increase in the use of technology and greater comfort with its use overall.

The second year of the program was transformational where the former 'Computer Period' became a subject with an integration focus now known simply as 'Tech Time'.

"Our hope is that within three years 'Computers and Tech time' won't need a title or a subject; technology will be used as a part of effective teaching and learning"

Milissa Gavel

This required a shift in thinking on the part of teachers in the school. "Our hope is that within three years 'Computers and Tech time' won't need a title or a subject; technology will be used as a part of effective teaching and learning," Gavel says.

The transformation was also reflected in student work. For example, students now revise and edit work using Microsoft Word; publish, share work and practice speaking skills using PowerPoint; convey information, communicate and send attachments using email; learn about media studies, digital book reports, movie trailers and book talks using Windows Movie Maker; develop research strategies, skimming and scanning using the Internet; develop online safety awareness and practices; explore the usefulness of digital concept mapping; and blog for online communication purposes and publishing work. And this is only the start.

The range of applications and work students undertake has expanded dramatically as technology has become a seamless part of instruction time. Gavel herself has become recognized as an educational technology leader in her school board and across the province, and has delivered many presentations at workshops and conferences. She's written a handbook on the integration of whiteboard technology into the classroom and runs a blog. Future plans are ambitious. "Within two years, I plan to see most teachers using technology as a tool independently and supporting one another as a collaborative community of learners," she says.

TEACHING THE BIG HISTORY ... AND THE LITTLE STORIES

Christian Lagueux teaches at the Polyvalente de Saint-Georges in Saint-Georges, Quebec and his brother Jean-Pierre teaches at the Polyvalente Bélanger in Saint-Martin, Quebec. For a long time, they have collaborated to make learning about history and it's cultural context a more immediate and stimulating activity for young people. Their project involving the reproduction of historical objects is a perfect example. Jean-Pierre Lagueux explains that the activity requires four types of inter-disciplinary skills. The students develop their ability to synthesize information while searching for facts about the object they have chosen to recreate. While making the object, they use their creativity and artistic talents. Their language skills are challenged as they prepare fact sheets on what they have created. And in the final step, they publish their achievements on the Web, and in the process, expand their knowledge of information technologies.

For the past seven years, their students' historical creations have been exhibited at the Christmas in New France event in Quebec City, where thousands of visitors have admired the artefacts. "The artefacts our students made for the Christmas in New France event seemed so genuine that some visitors wanted to buy them," Christian Lagueux said proudly while displaying some of the youngsters' creations. The sculptures, pots, ceramics, fabrics, clothing, documents, portraits and dishes all reflect daily life in New France between 1608 and 1759. "We take this very seriously," Christian Lagueux points out, "Students have to use the materials and the methods of the era, and beware anachronisms!"

Jean-Pierre Lagueux says that this teaching method puts students in touch with the daily lives of people from that era. "Some of them decided to embroider an alphabet book, as the young students of the Ursulines did, to learn their ABCs. Back then, school was run by the catholic church and the nuns demanded perfection. If you made a mistake when you embroidered a letter, you had to do it over again until it was perfect. The same rule applied to our students, who quite quickly grasped the importance of a job well done."

The two teachers stress practical learning to help their students discover their own social universe. Knowing that few young people understood the parliamentary system of

government in Quebec and Canada, the Langueux brothers restructured the student council to encourage students to follow the parliamentary model of governance. "This project generated lively interest and was adopted all over Quebec," Jean-Pierre Lagueux explains. "The National Assembly was so impressed by the activity that it now provides support for schools that want to try the experiment."

Always looking for hands-on learning opportunities for their students, the Lagueux brothers began working with partners and have now expanded the scope of their projects. They have collaborated with the National Battlefields Commission and have even developed a project that allowed their students, via the Internet, to "accompany" Christian in Tunisia, where he was taking part in archeological digs. "This was done as part of a general course in ancient history," Mr. Lagueux explains. "The subject matter was Egypt, Rome and the birth of Europe. It was a real pleasure, for example, to be able to show them mosaics that no one else had seen for 2,000 years."

Christian Lagueux hopes to be able to repeat the experience, because even in the last few years, technology has advanced considerably, he explains, and as a result he would be able to make the experience an even more immediate one for the students.

COLLECTIVE WISDOM

Each of the PMA Excellence winners completed a comprehensive questionnaire providing answers to questions that explored their personal and professional qualities, attitudes and experiences. During their visit to Ottawa they shared experiences and passed on their insights and hard-earned knowledge during the two-day workshop. The following are excerpts taken from the questionnaires. The answers are direct quotes:

Describe Yourself in a Single Sentence

"I download my enthusiasm for math and science into the hearts and minds of young people."—***Angela Magon***

"Those who say, it cannot be done are interrupting those of us doing it."
—***Melanie Gertley***

"I am a life-long learner with an insatiable curiosity and a deep love of nature, eager to share the joy and wonder of the world, but with a critical scientific mind that demands a search for truth."—***David Moffat***

How Do You Instill a Love of Learning in Your Students?

"I seek to help them discover their passion by allowing opportunities for success and involving them in meaningful projects. A mastery level approach to learning allows kids to not see assessment as a negative thing but as an insight into their own learning."
—***Murray Bulger***

"Try to draw out student potential by challenging, inspiring and encouraging students, emphasizing respectful listening with effective communication skills."—***John Harris***

"I model risk-taking and the adventure of challenge. It is contagious."—***Ian Fogarty***

"By loving to learn myself. The best way to teach that I have discovered is by modeling behaviour."—***Terence Young***

"I download my enthusiasm for math and science into the hearts and minds of young people."

Angela Magon

What Should Teachers know about ECE?

During the two-day workshop in Ottawa, the 2008 PMA Teaching Excellence winners and the ECE winners were brought together to share and discuss common values and ideas and to acknowledge the importance of the role they each fulfill. Given that education is a continuum, it is important to share information from each end of the educational spectrum. In the companion booklet that describes the exemplary practices of recipients of the PMA Awards for Excellence in Early Childhood Education, educators similarly communicate the importance of teaching from their own perspective. When asked to comment, ECE said of their teacher counterparts:

"I have found that as diverse as people are, so are teacher's perspectives of the ECE field. My desire is that we unite as one educational system, that we all value the role we play as educators of children."—*Brenda Rempel, 2008 PMA for Excellence in Early Childhood Education Recipient*

"We are not a daycare - we provide the foundation for all future academic success and set the tone for attitudes concerning school and learning. We empower the youngest students to do their best and take pride in their accomplishments."—*Terri Calder, 2008 PMA for Excellence in Early Childhood Education Recipient*

Top Ten Helpful Tips From PMA Winners

1. Love your subject.
2. Remain a student yourself.
3. Have a life outside teaching.
4. Establish reasonable goals.
5. Share everything.
6. Cultivate innovation.
7. Delegate when you can, but don't be afraid to take control.
8. Leave psychotherapy to the professionals.
9. Admit when you're wrong
10. Remain humble. ***—Terence Young***

Check out the full list of top tips at:
www.pma.gc.ca – www.ppm.gc.ca

Tools and Resources as Suggested by 2008 PMA Winners

"Open source tools such as RRS feeds, the wide range of free Google products such as Google Docs, Earth, Maps, Sketchup, YouTube and Books and other Web 2.0 tools. Adobe Flash, Photoshop Premiere, Dreamweaver, Microsoft Office, Sharepoint and Net. The above tools should be used in conjunction with a good programming language such as Javascript or Actionscript that will allow students to learn how to make their projects highly interactive - Lego NXT - a good 3-D modeling program that can be used to create objects for a class, multiple user virtual interface such as Second Life or Active Worlds. A good sound editing program such as Cubasis."***—John Harris***

1. Definitely read academic journals for teaching. There are some great ideas.
2. Do your Master's degree. It gave me wonderful insight into my teaching practices and led me to be a lot more reflective.
3. ***www.nicenet.org*** or moodle are great interactive classroom discussion sites.***—Devon Ross***

Mentoring Others—How would the Teacher winners guide new teachers? What advice would they give?

"I would model hands-on lessons where students had plenty of opportunities to work with one another and discover answers and new information independently. I would show them how to incorporate technology, not teach how to use the technology."
—Milissa Gavel

"The dizzying array of new technologies will try to trick us into thinking that they are the panacea that will solve every educational challenge. Don't believe it; I've been alive long enough to hear that kind of euphoric praise given out for the potential of television for education. The fact is that technology is very powerful only if it is enmeshed in effective instructional design; therefore, the decisions you make as a teacher are crucial!"
—John Harris

"If I were to mentor a new educator, I would tell them that every child in a classroom is different and that it is important to be aware of the needs of the children in your care. I would stress the importance of mutual respect in a structured well-disciplined learning environment. I would show them how to develop exciting and innovative lesson plans based on current curriculum outcomes as prescribed by my district."
—Shannon McCarthy

"Not to try and teach like me. You need to develop your own style. Good teachers beg, borrow, and steal strategies from more experienced educators. Good educators are continuously checking to see if they are in a rut or if they have discovered an effective pattern of pedagogy."***—Ian Fogarty***

1. Don't reinvent the wheel. There are so many resources out there to use.
2. When you find an online resource that you plan on revisiting, don't just bookmark it. Print off the first page of the site and insert it into your binder where you would use it. Otherwise you'll forget it's there.
3. Don't be afraid to solicit advice from your colleagues - they are a wealth of information.
4. Beware of negativity and attitudes of that won't work.
5. Sit in on as many colleague classes as you can. Bring your marking if you need to.
6. Don't be afraid to try new things and change things that aren't working for you.

—Angela Magon

Prime Minister Award winners at the Awards ceremony in Ottawa. May 2008.

PMA PROGRAM PARTNERS

MICROSOFT CANADA

Through our flagship digital inclusion programs, "Partners in Learning" and "Microsoft Unlimited Potential", Microsoft Canada provides technology access and training to all types of learners, no matter where they happen to be on the continuum of ICT skills and knowledge. We offer skills training for schoolchildren, for teachers who need to learn how to incorporate technology as part of their classroom instruction, and for community learners. Microsoft has built relationships with universities, colleges and departments of education, to provide tools and resources for educators, and grants in support of professional development initiatives. These valuable teacher training programs have provided Canadian teachers with access to software tutorials; shared lesson plan ideas; online seminars on key topics such as managing technology in the classroom, and links to Web resources. Community based projects in Canada, such as JobStart, ProTech and CanTech are all designed to enable youths to realize their full potential by providing such access to technology and training in safe, caring environments such as the Boys and Girls Clubs, YM-YWCA, and designated community training centres. Together, these digital inclusion programs lay the groundwork for increased economic opportunity and social improvements in Canada.

PETRO-CANADA

Today's skill shortage is a significant challenge for our industry because we rely upon skilled people to bring our projects to reality. Engaging students and post-secondary institutions in meeting the skill shortage is a priority at Petro-Canada. To help meet the need for skilled workers, we encourage students towards careers in the oil and gas related disciplines. Whether through the technology and trades routes or university studies, addressing this skill shortage is the current focus of our educational partnerships. The Petro-Canada Emerging Leaders Awards and the Petro-Canada Young Innovators Awards are the company's flagship education programs. Petro-Canada also provides significant annual education funding to the National Aboriginal Achievement Foundation.

RBC FOUNDATION

RBC Foundation believes in building prosperity by contributing to the communities in which we live and work. They are now one of Canada's largest corporate donors, and support a broad range of community initiatives, through donations, sponsorships and employee volunteer activities. In 2007, RBC contributed more than $82.8 million to community causes worldwide. As a founding member of Imagine Canada, RBC is committed to donating at least one per cent of our average annual net income before taxes.

RESEARCH IN MOTION

Research In Motion (RIM) is a proud sponsor of programs that focus on educational excellence and supports initiatives that engage students in the areas of science and technology at the elementary, secondary and post secondary levels. As one of Canada's largest co-op employers, RIM hires over 1,000 co-op students each year, providing them with an opportunity to gain practical work experience that complements their academic learning. In addition to supporting students, RIM also invests in higher education through many research initiatives with Canadian Universities.