interviews

Continued from previous page

"The opportunity to interact with educators, administrators & consultants from all over Quebec allows us the chance to exchange and share."

Tom Fullerton
Westpark Elementary School, LBPSB

"Gayle Gregory was refreshing and stimulating!"

Grant Baergen
Riverside Regional High School, CQSB

"I came with many questions on my mind and I was curious. My questions now are at a higher level and my curiosity even stronger."

Wolf-Dietrich Kandler
St. Paul's School & Mountain Ridge School, CS du Littoral

"Having the opportunity to be exposed to current research and, as a result, be challenged to improve on what we do for others."

Mary Reynolds
Holy Cross Elementary School, EMSB

"Taking the time to be together, discuss issues that matter to us as educators and hear speakers on the leading edge of educational innovation. Well thought-out program."

Group Answer
New Frontiers School Board

"A good assortment of workshops. A happy, positive atmosphere. Much appreciated."

Murray Gunson
Knowlton Academy, ETSB

"Inviting governing board chairs – I think they should be invited every year – they need to connect and get the professional validation they deserve."

Christine Bacon
G. Théberge School, WQSB

"Even though my head is spinning with new ideas, I appreciated the opportunity to share with other educators and learn from their experiences and expertise."

Anne-Marie Kee, Rob Tipney, Serge Melançon
Lower Canada College, QAIS

"The focus upon actual teaching and learning, and how we, as educators, can better serve our student clientele."

Deb Foltin
St. Augustine, Mecatina & St. Lawrence Schools, C.S. du Littoral

"This is a very difficult question to answer since I feel as though my brain has been taken out and dusted! These workshops will definitely help me to become a better parent, chairperson and indeed, individual. I only wish our teachers could have attended as well! AMAZING!"

Lynn Visentin, Chair, Governing Board
St. Michael's School, WQSB

IMPLEMENTATION
DESIGN
COMMITTEE

The Implementation Design Committee would like to thank all the workshop leaders and participants for making this two-day event such a resounding success. The committee is particularly grateful to the following people for making this publication possible:

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Information about school reform in Québec, the new programs of study, a calendar of training sessions, the "Parent Zone" and much, much more is only a click away. Please visit the Québec School Reform website at:

www.qesnrecit.qc.ca/reform

Ministère de l'Éducation
Québec

Learning Together: Curriculum in the Classroom

A Leadership Symposium

As the Implementation Design Committee (IDC) for the Anglophone educational community continues to address the implementation of the Québec Education Program, we recognize the need to create opportunities to learn, share and develop capacity in our schools and school boards. To this end, the third Leadership Symposium was held at the Sheraton Laval on February 18-19, 2002. The theme of the symposium was "Learning Together: Curriculum in the Classroom."

I am proud to say that feedback has been most positive, particularly given that we had a different clientele who attended this year. As the opportunity presented itself, the IDC invited members of Governing Boards and school commissioners who were quick to avail themselves of the invitation. Our keynote speakers Gayle Gregory and Robert Sylwester treated over four hundred and fifty participants to outstanding presentations. Break out sessions were then made possible by some of the expertise available in our school boards and the services of the MEQ - in particular the Services à la communauté anglophone (SCA).

In this issue of ***Portfolio***, we have compiled some of the activities of the symposium for those of you who were not able to be with us. We do however look forward to seeing you next year, as plans are already underway for Symposium 2003.

Ainsley B. Rose
Chairperson
Implementation Design Committee

Day 1 – Keynote Address

A Praiseworthy Brain in Search of a Brainworthy School

Robert Sylwester, Emeritus Professor of Education at the University of Oregon, has been called the "grandfather of brain-based learning." His goal is to make educators aware of how human beings really do learn, in a biological way, in order to connect that knowledge to their everyday practice. He writes a monthly column for an Internet magazine called Brain Connections [www.brainconnection.com], and his E-mail address is: bobsyl@oregon.uoregon.edu .

In this keynote presentation, the audience learned about the recent, momentous discovery of "mirror neurons" (on the same scale as the 1953 discovery of DNA) and the organization of the brain on the whole.

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To understand mirror neurons, we first have to understand some basic concepts of how a brain works. The brain's primary challenge is the following: to become a successful organism. First, to stay alive, it must be able to recognize dangers and opportunities. Second, to get into the gene pool, it must respond to dangers and opportunities. Human beings go through a twenty-year developmental cycle: learning to stay alive takes place in preschool, kindergarten and elementary school (the first ten years); becoming a productive, reproductive human being occurs during the second ten years of life.

We have a two-part brain: a lower part (subcortical area that regulates the innate and regulatory activities of the body) and a top part (the *cortex* that deals with the conscious, reflective activity). The mirror neuron system is located here. Mirror neurons fire when observing someone doing a task as well as when actually doing the action. "Why is it that little kids can learn to speak so easily? Because for the first two years of their life when everyone's going 'blah blah blah,' although they can't talk, their mirror neuron system is setting up the motor system for articulate speech."

Recent studies have shown that there are thousands of individual processing systems in the brain that operate somewhat autonomously, yet collaborate to carry out a given activity. Mirror neurons are lined up in columns of 10 (600 million columns, 60 billion neurons in the cortex of the brain) and each column carries out a single function. When we observe something, different columns are active in a collaborative operation. "This is what we call the 'social brain.' It's a beautiful operation!"

If we look at the organization of our brain, the *prefrontal cortex* seems to be the "CEO or symphony conductor of the brain." This part is connected to every single other organizational structure in the brain. It is the part of the brain that makes decisions, where moral and ethical behaviour occurs. This is almost the last part of the brain to develop.

Mirror neurons are especially important in producing language. "They are what teaching and learning may be all about. It's an absolutely astounding discovery, the most important underreported discovery, because it's so monumental that nobody knows what to make of it. But it certainly suggests how important social learning and the model behaviour of teachers and parents are," said Sylwester.

For example, while it is one thing to get thirty youngsters watching the teacher in a classroom, all thirty are watching only one person. "Imagine how much more powerful it is in a cooperative learning situation where you have six people, each one watching what the other is doing. Not only do you have an authority doing something, but you also have an integrative activity that goes on in areas of cooperative learning."

We are only beginning to understand the implications of the mirror neuron system, he said. "When we take a look into the future, we'll say that this discovery is the fundamental neurobiological essence of what teaching and learning is all about." ●

Day 2 — Keynote Address

Differentiated Instruction: One Size Doesn't Fit All

Gayle Gregory is an educational consultant who works with teachers, administrators and staff developers around the globe, specializing in such areas as brain-compatible learning, block scheduling, and emotional intelligence. As keynote speaker on the second day of the Symposium, she discussed how the brain processes information and provided some examples of how this knowledge can be applied in the classroom. Visit Gayle Gregory's Website at www.edu.yorku.ca/~gayle_gregory.

When Gayle Gregory first began teaching, she quickly learned one thing: if some students didn't get it the first time, saying it louder and more slowly from another part of the room wasn't going to work. Thus began a career of looking for ways to engage more learners. "Differentiation is really about good teaching," she said. "It's about having an instructional repertoire to meet learners where they are and take them forward."

There are five elements that teachers should consider in planning for differentiation: climate, knowing the learner, assessing the learner, adjustable assignments, instructional strategies and curriculum approaches.

Knowing the learner is about needs, learning styles, and multiple intelligences. Gregory pulled out four objects to get the audience thinking about different types of learners. Would you most compare yourself to a paperclip, a slinky, a magnifying glass or a teddy bear?

Paperclips like routine and structure; they're organized. Generally, 33-35% of students in a classroom fall into this category. For magnifying glasses (18%), details are important. They want to know the *why* of things. "Paperclips learn step by step; magnifying glasses learn doubt by doubt."

Teddy bears (33-35%) want everyone to feel safe and comfortable. They like to talk about things, they worry about the emotional well-being of others. Slinkies (12%) need movement and choice. They take the information and then want to know what they can do with it, where they can go. "Many drop-outs are slinkies, because school doesn't meet their needs," said Gregory—a slinky herself. "If I'm a paperclip teacher, or if I'm a magnifying glass, I have to ask myself: how am I tending to the other learning styles?"

Assessing the learner is another key element—especially pre-assessment. "If we all know this is so valuable, why don't we do it? Most teachers will say: lack of time." But knowing where the learner is at saves time down the road, and it allows teachers to adjust assignments.

How we process information

Because we work with brains every day—our own, our students' and our colleagues'—it's important to know how information-processing takes place, said Gregory. She quoted researcher Leslie Hart: "Education is discovering the brain, and that's the best news there could be…. Anyone who does not have a thorough, holistic grasp of the brain's architecture, purposes, and main ways of operating is as far behind the times as an automobile designer without a full understanding of engines."

When information comes in through our senses, it captures our attention most effectively through sight (47-49% of our attention), touch (33%) and sound (17-19%). There goes the traditional way of introducing a lesson by simply announcing it.

Gregory recalled one class where students came in to see their teacher pacing the room in a white lab coat, goggles and latex gloves. "What's wrong? What's the matter?" they asked. "I have a problem," she said. She sat them down around her and pulled out a bag filled with a mysterious substance. "I found this and I don't know what it is…" And so began their lesson on matter.

"Of course you can't have a gourmet lesson every day, but if you plan one a week, at the end of the year, you might have 30." If you share with colleagues, you'll have double. Brain teasers are another way to garner attention.

Working memory

Why is getting students' attention so crucial? "We let go of about 95% of what is stimulating us through our senses—so you have less than a second to get students' attention." Once you get that attention, the information moves into the working (short-term) memory, where it stays for 17-20 seconds. At that stage, because the brain has only 7 spaces to remember things, we need to look for patterns and ways of organizing the information. Yet often, students don't know how to do this.

"We tend not to spend enough time processing the information," Gregory stressed. In order for information to make it into our long-term memory, we need to elaborate, practise, rehearse. Students do this by solving problems, carrying out projects, and sharing what they've learned.

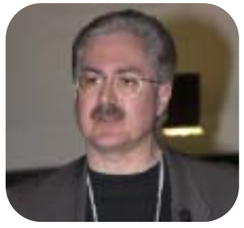
Where to go from here

The shift to differentiated instruction is a journey. Organizations should begin by sitting down to discuss what differentiation is and why it's important. Once they have a common understanding, educators can look at what elements they are already practising, what their colleagues are doing, and what they need more information on. "We need to honour where educators are at in the process," said Gregory. ●

School Success Strand — Keynote Address

Building Blocks for School Improvement: Lessons Learned at Peel District School Board

Paul Favaro is chief of research and evaluation at the Peel District School Board. With over 125,000 students in 200 schools, Peel is Ontario's second largest board. Having been involved in school improvement planning since 1990, Favaro was able to share some of the lessons learned at Peel, describing the school improvement model they have developed and identifying key factors for success.



Since 1996, Ontario's Education Quality Assessment Office (EQAO), an independent body, has been in charge of implementing performance-based, curriculum-based tests (as opposed to national standardized tests). It was the schools, boards and teachers who lobbied for this, said Favaro. "For the first time in Ontario, we have an accountability measure that is performance-based and is a direct measure of the curriculum."

Last September, the Ontario Ministry of Education published an Accountability Framework. It focuses on continuous improvement, standards of teaching, effectiveness of school boards, school board spending and adequacy of funding. An audit process is used to evaluate school boards in terms of curriculum, student achievement and budget.

The framework also makes provisions for annual report cards for schools, boards and the province. The report cards will contain a series of indicators that schools and boards will use to report to their community.

All this testing and data collection may seem remote from the Québec context. However, Favaro stressed that the emphasis is not the data itself, but what is done with it. "We look at the data and say, what does this say about our school? If the data doesn't lead to a sense of urgency, there will be no change."

School Success Planning Model

Data collection is just one element of the School Success Planning Model that Peel has developed. The model is a four-stage process: (1) Creation of a professional learning organization; (2) Data collection and analysis; (3) Action plans; and (4) Communication plans.

At Peel, all schools participate in all stages of the planning. Each school develops its own action plan for school improvement (school success plan), according to its own needs and priorities. The board provides a template and other tools to assist them.

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Stage 1 is about establishing a climate for change and developing a results-oriented and collaborative culture. "Sustained school improvement depends on developing the capacity of schools to function as a professional learning community," said Favaro. This means learning to work together, sharing the same vision, values and goals, and developing a high tolerance for truth. "You can either bury the data, or use it to create a sense of urgency and passion."

Stage 2, data collection and analysis, has four components: context and demographics, perception and attitude, learning data and program data. All four are crucial for putting the learning data in context. One must also be able to interpret the data, to know its limitations, and to look at results over time. "The data and context are used to identify what area to focus on, and to come up with a plan that makes sense to the school."

In stage 3, schools use the data they've collected, analyzed and interpreted to prepare their action plans. People participation is key. Why? According to the *Harvard Business Review*, said Favaro, 8 out of 10 plans fail because not enough people are involved in the process.

Improvement plans focus on the school and classroom. They answer the question: "What will we focus on now?" They are best designed over three years, and should set specific targets for improving student achievement.

Then comes stage 4, communication. "In the first two years, we forgot to tell people what we were doing; we forgot to ask for people's input and help." Now schools communicate with their staff, parents and the community throughout the year. Open communication regarding student performance and the school improvement plan also reduces public demand for school rankings, Favaro noted.

While the notion of transparency mightsound scary at first, it is better to be up-front about problems and tell people what you are doing about them. "If you don't come up with your own plan, other people will come up with one for you," said Favaro. ●

Making Space for Robert: **Integrating** *Technologies Into a* **Constructivist** *Classroom*

Mary Cameron, a CIS (Coalition of Innovative Schools) educational consultant from the Rocky View School Division in Alberta, described her experience in an integrated constructivist classroom as a teacher at the Banded Peak School. The school, created in 1996 by educators in the community, was designed to support its unique philosophy, i.e. an inquiring philosophy that focuses on classroom-based research and integration of technologies. Kids from kindergarten to grade 8 regularly share the same classroom areas: the older kids can teach the younger ones and vice-versa. "Children teach each other and teach the teachers how to use computers *when* they need them," said Ms. Cameron. "*Just in Time* learning is something that is very much a part of the school. It is a very open, collaborative place."

Robert was a grade one student of Ms. Cameron's and "a wonderful boy," the epitome of a successful learner: "full of life and wonder, one who's not going to sit in a chair and write all day long." Her goal was to keep Robert's enthusiasm alive. In a conventional school, Robert would have been labelled a special student with learning difficulties—but not at Banded Peak School. Robert was given the space to progress in his own particular way.

The teaching at the school is based on students' needs. "There are lots of different ways to be focused and engaged in an activity," Ms. Cameron explained. Teachers work alongside students and don't necessarily have all the answers (especially in ICT, where students often know more about computers than the teachers do!). In the *Stellar* program, older students act as mentors for younger children (or teachers) with technology problems. Children are always collaborative: there are hardly ever kids alone in front of a computer. They work with the shared files and directories of the school's networked computers, and connect to the world when they want to make it come alive (e.g. E-mail correspondence with a class from New Zealand). Students are interested in the subject matter more than the computer hardware. "Kids don't see the technology."

For educators, the work structure includes whole group discussions, team meetings, team representatives meeting with teachers, and whole group meetings to discuss strategies, learning and structure. In the classroom, while teachers help and steer the students when necessary, students basically do what they have set out to do.

Educating children also requires educating parents, and so it is important to keep parents involved. "Lots of parents come into the classroom; they're always welcome." In fact, Ms. Cameron used digital cameras to document children's work and to show parents, via the classroom's Web page, the types of activities their children were engaged in at school.

"You have to be passionate about the work, and you have to bring out the passion in children. If you engage students in what they are doing, then there's no need for discipline."

For more information on the Rocky View School Division, Banded Peak School and a link to the Innovative Schools Network, go to: <http://www.rockyview.ab.ca/>. You can contact Mary Cameron at: mcameron@rockyview.ab.ca . ●

Cooperative *Learning and Student* **Team** *Building*

Terry Saba and Pierrette Morissette from the English Montreal School Board led this bilingual workshop that provided the opportunity to experience a variety of cooperative learning and team-building activities. The workshop was divided into four brainstorming activities: *Card Match and 3-Step Interview, Number Game, Roundtable and Graffiti*. Each activity was followed by a period of reflection to allow participants to write down their own description of the activity and possible applications to their work.

The workshop started out with a *Card Match*, where the group was divided into pairs at random, using game cards. Pairs then engaged in a *3-Step Interview*: each person asked the other two sets of questions, professional and personal, in order to get to know the other person. Each pair then joined another pair and presented their partner, based on what they had just learned. This was a great opportunity to make new connections.

In the *Number Game*, each person drew a number from an envelope and responded to questions on a sheet corresponding to the number drawn. Other members then asked for clarification and elaboration, with the game continuing until each person had responded to at least one question. The questions dealt with cooperative learning and team-building initiatives. The following *Roundtable* allowed each group to give a summary of their observations on successful team building to the rest of the participants.

Finally, groups rotated around the room, stopping at graffiti stations posted on the walls and writing down ideas related to one of the following headings:

1) Ways of promoting effective team relationships with workplace co-workers
2) Ways of diffusing conflict among co-workers
3) Ways of converting negative behaviours to positive ones
4) Ways of promoting effective team relationships in the classroom ●

Left picture:
Pierrette Morissette
Right picture
Terry Saba

Using **Math** *Activities to Develop* **Cross-Curricular** *Competencies*

Michael Cassidy, a MAPCO (Math Action Plan Committee) resource person from the Lester-B.-Pearson School Board, presented participants with a refresher workshop on the cross-curricular competencies as they relate to mathematics at the elementary level.

He started out by crediting Québec math programs on the whole for fostering success in students, who have repeatedly achieved top results in international tests. "Québec is no. 1 in math tests in Canada and the 6th 'mathematical nation' in the world. We're obviously doing something right… . We teach the same content as others, but what we do best is to emphasize problem-solving. Our examinations have been evaluating this aspect for some time. What is new in the QEP is that the good practices are now shared across the province."

Participants engaged in two classroom activities in order to make connections between the competencies and practical work. The Cycle One activity, entitled "How Much Do Bugs and Beasts Eat?", involved keeping a caterpillar, feeding it a leaf and then measuring how much a caterpillar eats per day. This activity was based on a reading of the book *The Very Hungry Caterpillar*.

The Cycle Two activity "Which is the Better Buy?" asked participants to compare prices of food products in the grocery flyers of competing food chains and to use math skills to find out where the best buys could be found. Suggested extensions of the activity included having children set up a classroom store or survey family members on their shopping preferences.

Finally, participants were given outlines of project activities for Cycles Two and Three and asked how they could develop and enrich the projects to develop one or more cross-curricular competencies. ●

Literature *Links to* Mathematics

To many children, math is positively boring, complicated and abstract, with no bearing on their day-to-day lives. On the other hand, most children love a good story.

Pat McQuatty, math consultant for the Western Québec School Board, is constantly on the lookout for books that combine the two: quality literature and basic mathematical concepts. "We need to link math to real-life situations so that it can be seen as a tool, just as reading is a tool to decipher signs," she explains.

McQuatty began the workshop by presenting a book called *How Many Candles* (Helen V. Griffith). It is the story of a friendly and loyal dog, Alex, who is wondering how many candles to put on a birthday cake for his best friend Robby, a boy who is about to turn 10. "Ten years! That's like 70 years for a cat!" exclaims his feline friend. "Ten years is nothing," replies a turtle. "Ten years for a boy is like 8 years to a turtle." And so the story goes. With its appealing illustrations and characters, the book offers an interesting way to introduce proportional reasoning.

When using literature in math, it is important to read the book through once and enjoy it as a story, said McQuatty. The teacher can then go back and pull out the math, asking the class questions and writing important elements on the board.

It's not always easy to match good literature with good math, or to find books where both the literature and math are at the appropriate levels. McQuatty tends to divide the books she finds into three categories: math enclosed in a picture book—such as *The 100th Day of School* (Angela Shelf Medearis), which deals with the concept of 100 and factors of 100; books that are math centred but still have a good story—such as *The Math Curse* (Jon Scieska and Lane Smith), which provides examples of math in everyday life; and books that are rich in both literature and math—such as *The King's Chessboard* (David Birch), which incorporates the concept of exponential growth through doubling.

Participants took home several journal articles on linking literature and math, a bibliography of the 25 books examined in the workshop, and an extensive book list from the Ohio Literacy Resource Center website: <http://archon.educ.kent.edu/Oasis/Resc/Educ/mathkidslit.htm>. ●

Portes françaises – *le portail de ceux et celles qui enseignent le français dans les écoles anglophones du Québec*

Sylwia Bielec, la webmestre du site, a fait un survol de *Portes françaises*, l'instrument de réseautage par excellence pour les élèves et professeurs de français, langue seconde, dans les écoles anglophones du Québec. L'activité nous a permis d'explorer les nombreuses ressources du site haut en couleurs et franchement sympathique, qui est mis à jour très régulièrement. On peut y accéder en tapant l'adresse http://www.qesnrecit.qc.ca/fls/ ou en suivant les hyperliens menant aux sites de langue anglaise sur le site du MEQ.

Mme Bielec a présenté les différentes rubriques du site. Celles-ci sont bien présentées sur la page d'accueil. On y trouve notamment :

Quoi de neuf : informations sur les activités professionnelles à venir, nouveautés sur le site, exemples de projets pédagogiques complétés (*Chantopoly, Jeu de 21, Branchez-vous*), etc. ;

Trousse pédagogique : ressources médiatiques (journaux, revues, chansons, comptines, etc.), curriculum, pédagogie et domaines d'apprentissage;

Place aux projets : exemples de projets motivants, dont le projet multimédia 2000-2001 de la classe de premier cycle de Louise Hamelin à l'école St. Dorothy, de la Commission scolaire English-Montréal, intitulé *Le grand album de tous nos MÉCHANTS* ;

Salle des profs : lieu où les professeurs de français dans les écoles anglophones peuvent échanger des listes de diffusion, des contacts, etc. ;

Les TICs à l'école : projets de *télécollaboration* avec des classes de partout dans le monde et projets de *télérecherche* pour exploiter les moteurs de recherche francophones. Un véritable trésor pédagogique au bout des doigts !

Pour plus d'information ou pour obtenir de l'aide au sujet des portfolios électroniques, veuillez communiquer avec Mme Bielec en écrivant à : bielecs@qesnrecit.qc.ca. ●

Project Work *in the Early Grades*

At St. Georges School, project work is well underway. Surrounded by pictures of tree frogs, books on Ancient Egypt, charts of questions and samples of their students' work, Zenia Dusaniwsky and Clare Gabert, teachers, and Hannah Hershman, student support services coordinator, talked about how to guide young children through the demands of a project.

"Projects give the opportunity to individualize learning—both for students who need a challenge and for those who need additional support—in a discreet and interesting way," they said. Projects engage students in real experiences and challenges, enable them to conduct first-hand research, and help children understand events around them.

The trio guided workshop participants through the process from start to finish, drawing from their own experiences with students in grades 1 and 3. They began by providing examples of how to initiate a theme and where to look for resources.

As a teacher, you must be interested in the topic, they emphasized. "Your passion or lack of interest will be reflected in the students' attitude." All kinds of springboards can be used to pique students' curiosity: a movie, a true or false quiz, a field trip, zany photos.

The presenters described the Taba box method for teaching children how to take notes, organize their information and write up a report. They stressed the importance of discussing the difference between fiction and nonfiction with the children, and of modelling each step of the research process.

Finally, they showed how projects can be very hands-on and cross-curricular, incorporating science, art, debating, music, or French. Their advice: "Above all, make it practical and meaningful." ●

Left picture:
Zenia Dusaniwsky
Top picture:
Hannah Hershman
Bottom picture:
Clare Gabert

Can we quote you?

What was the single best thing about this two-day symposium?

"The presentations by Gayle Gregory were exceptional. I found her to be engaging, relevant, through and interesting. She provided me with much to think about and to implement. Thank you." ●

Rocco Barbieri
Our Lady of Pompei Elementary School, EMSB

"Regardless of your role in the education system, each workshop was applicable at varied levels. What a wonderful era for children to be entering the education system." ●

Caroline Eastman
Phileman Wright High School, WQSB

"Technology Learning Outcomes: Cycle Two, presented by Nancy Coquard & Don McLean." ●

K. Glover
Massey Vanier Regional High School, ETSB

"The most important thing is having an opportunity to dialogue with other educators - formally and informally. The exchange of ideas always fosters a sense of renewal." ●

Carol Manning
Selwyn House School, QAIS

"The last two days have brought the brain back into the classroom." ●

Pam Bown
Val Cartier Elementary School, CQSB

"Electronic portfolios seem like the wave of the future. Well done, Natalie. Mike Cassidy is a consummate professional. He gave a simple, clear presentation on math and cross-curricular competencies." ●

Ken Elliott
Spring Garden Elementary School, LBPSB

Continued on next page