



Mathematics Council NEWSLETTER

The Alberta Teachers' Association

Providing leadership to encourage the continuing enhancement of teaching, learning and understanding mathematics.

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President's Message

After a short, cool summer, another school year is under way. We have had some changes to the Mathematics Council executive. Our treasurer, Doug Weisbeck, has served MCATA for 11 years and has decided to step down. We are grateful to Doug for his service and dedication. Taking his place will be Elaine Manzer, who has been serving as vice-president.

Also leaving the council is Dale Burnett, our faculty of education representative, who served for close to 10 years. We thank Dale for his invaluable contributions to MCATA. We will be filling his position in the next month.

Two MCATA directors, Shauna Boyce and Janis Kristjansson, have moved into vice-presidential positions. These ladies also serve as director of publications and director of professional development, respectively.

Our *delta-K* editor, Craig Loewen, is being assisted this year by a co-editor, Gladys Sterenberg, who will take over the editor's position next year.

Continuing to serve with the MCATA executive are Sandra Unrau, Donna Chanasyk, Sharon Gach, Martina Metz, Geri Lorway, Charlotte White, Anne MacQuarrie, Daryl Chichak, Robert Wong, Deanna Shostak, Indy Lagu, Carol Henderson and ATA staff officer Dave Jeary.

It is my pleasure to serve as president of the council and I am looking forward to a great year with MCATA. I hope to see you in Calgary at MCATA's fall conference on October 28-30.

—Len Bonifacio

From the Editor's Pencil

Recently, the school where I teach hosted a math carnival. We opted to call it a carnival rather than a fair to allay any perception that competition would be attached to the event. In the days leading up to the carnival, there was unprecedented excitement about learning math, and students anticipated sharing math with peers, parents, friends and neighbours.

The problems we chose were obtained from the Galileo website (www.galileo.org) and were customized for the children involved. The children were to become experts with their problems and, at the math carnival, were to provide assistance if it was necessary. In my Grade 2/3 class, the children were also expected to write a story to go with their problem, illustrate the story and prepare a tri-fold backdrop for their booth.

The learning and engagement during the preparation time were phenomenal. We worked at math for whole days at a time, and children groaned when the bell went at the end of the day because they had "just one more thing to do." At one point, one of my Grade 2 students said, "I can't believe I'm saying this, Mrs. MacQ, but I'd rather do this than go to gym!" Another child told me that she used to be scared of math but now she understands that it is fun. What a wonderful lesson!

As teachers, we need to be mindful of how our enthusiasm for something challenging, interesting and fun can have an amazing effect on our students. You know you've got them hooked when you have to force them out of the room at recess!

—Anne MacQuarrie

Alberta Learning Update—Fall 2004

Learner Assessment Branch

Ken Marcellus is the new Pure Math 30 exam manager, and Steve Hardy and Ross Marian were both seconded from Edmonton Public Schools as the Pure and Applied Math 30 examiners. New to the achievement testing area are Bryan Quinn and Kelly Rota. Anyone at the Learner Assessment Branch of Alberta Learning can be reached at (780) 427-0010 or toll-free within Alberta at 310-0000; or e-mailed using the format firstname.lastname@gov.ab.ca.

As part of the Maintaining Consistent Standards Over Time initiative, all forms of the January 2005 Pure Mathematics 30 diploma examination (both Parts A and B) will be secure and will not be released at the time of this writing. Release of selected examination items from the 2004/05 examinations will occur in the autumn of 2005. For more information, see www.learning.gov.ab.ca/k_12/testing/diploma/security_chart.asp and www.learning.gov.ab.ca/k_12/testing/diploma/consistentstandards.asp.

Curriculum Branch

The drafts of *Mathematics Indicators for Grades 7–8–9* are complete and have been mailed out to all schools that teach Grades 7–9. These documents are also available on Alberta Learning's website, at www.learning.gov.ab.ca/k_12/curriculum/bySubject/math/indicate.pdf. This is a draft document and teacher feedback is encouraged.

Four new elementary mathematics resources have been authorized as Western and Northern Canadian Protocol (WNCP) resources. They are listed on both the WNCP and Alberta Learning websites (www.wncp.ca; www.learning.gov.ab.ca).

Learning Technologies Branch

There is an Applied Math 10 question bank on the Tools for Teachers website (www.tools4teachers.ca). A question bank for Applied Math 20 is being developed.

The LearnAlberta.ca website (www.learnalberta.ca) provides quality online resources to the Kindergarten to Grade 12 community in Alberta. New this fall are 11 new discovery applets that address outcomes in applied and pure mathematics for high school. These applets allow students and teachers to manipulate parameters and easily visualize the concepts being addressed. As well, 23 new junior high math video interactives and 4 new interactive learning objects will be added to the website this fall. Join the LearnAlberta.ca mailing list (go to the About page) to keep informed about new resources.

Math 24 is available from the Learning Resources Council (LRC).

delta-K News

We are pleased to announce that, as of August 2005, *delta-K* will become a refereed journal. *delta-K* is the ATA's professional journal for mathematics teachers in Alberta. This journal is published to promote the professional development of mathematics educators and to stimulate thinking, explore new ideas and offer various viewpoints on the teaching of mathematics.

A refereed review process will give teachers a voice as authorities in the mathematical educators' communities. It is our belief and hope that, by establishing *delta-K* as a refereed journal, teachers will participate as authors and reviewers, and will engage in ongoing professional conversations about mathematics instruction. We also hope that this process will help build an important mechanism for sharing the many marvellous activities, developments, resources and achievements from across this province.

The first refereed issue will appear late in fall, 2005.

—A. Craig Loewen and Gladys Sterenberg

NCTM Sponsors Online Math Magazine

The Mathematical Association of America (MAA) announces the launching of a new online magazine on the history of mathematics and its use in teaching, entitled *Convergence: Where Mathematics, History and Teaching Interact*. This resource is being produced with the cooperation of the National Council of Teachers of Mathematics (NCTM) and the financial support of the National Science Foundation (NSF). The target audience is Grades 9–14 mathematics teachers, be they secondary teachers, second- or fourth-year college teachers, or college teachers preparing secondary teachers. The magazine will include articles on the history of various topics in the curriculum, classroom suggestions designed for immediate use, historical problems, a today-in-history feature with mathematical events that happened on that date in history, interesting mathematical quotations that change daily, reviews of books and teaching materials, and a calendar of upcoming meetings and other events in the history of mathematics and its use in teaching. To visit the magazine, go to <http://convergence.mathdl.org>. For more information or to contribute, write to the editors: Victor J. Katz at vkatz@udc.edu, or Frank J. Swetz at fjs2@psu.edu.

Math Leaders' Fall Symposium 2004

Care . . . must be taken in applying mathematics to real-life situations. Too often, I have seen mathematicians, scientists, and engineers use flawed "mathematical" arguments to support their cases without recognizing the fundamental issue of whether the model is truly appropriate or relevant to the given situation. . . . Blind application of mathematics can often lead one astray.

—Ivars Peterson

You are invited to the Math Leaders' Fall Symposium 2004, entitled "From Myth to Math," featuring Ivars Peterson and being held at the Westin Hotel in Calgary.

To register, please e-mail Shauna Boyce at bebo@telusplanet.net. When registering, please include your name, school division, school and position, and indicate the grade(s) you work with or are associated with. Feel free to forward this invitation to others. Registration is limited to the first 75 applicants.

Math Leaders' Fall Symposium 2004: From Myth to Math

Shaping the Future with Mathematical Literacy

Featuring Ivars Peterson

Who: Superintendents, administrators, curriculum leaders and teachers interested in promoting quality math education

When: October 28, 2004

Time: 9 a.m.–3 p.m. (lunch will be provided)

Where: Westin Hotel, Calgary

Cost: \$30 (payable at the door)

Agenda

9–10 a.m.: MythMath, by Ivars Peterson

10 a.m.–noon: Table Talk

- How can we help our students think of mathematics as a way of making sense of the world?
- In what ways are we led astray in our thinking, both mathematically and otherwise? How can we use our mathematics programs to help our students transcend these thinking traps?
- How can we better incorporate the concepts of *evidence* and *proof* into our mathematics classrooms, especially in ways that regard them as more than a series of formalisms?

Noon–1 p.m.: Lunch (buffet lunch included in registration)

1–2 p.m.: How Can Simple Contexts Lead to Complex Math?, by Ivars Peterson

2–3 p.m.: Table Talk

- What are some of the advantages of starting with meaningful ideas rather than specific curriculum objectives? What are the obstacles to making this practical in our elementary, junior high and senior high classrooms?
- Can starting with ideas help us bridge diverse abilities within our classes?

Ivars Peterson serves as editor of *Science News Online* and *Science News for Kids*. He writes an online mathematics column that appears weekly on www.sciencenews.org and www.maa.org. He is also the author of several books, including *Mathematical Tourist: Snapshots of Modern Mathematics*, *The Jungles of Randomness: A Mathematical Safari* and *Fragments of Infinity: A Kaleidoscope of Math and Art*.

NCTM Affiliate News

2004/05 NCTM Conference

The National Council of Teachers of Mathematics (NCTM) 2005 Annual Meeting and Exposition is scheduled for next spring in Anaheim, California, on April 6–9, 2005. Dates and places of future NCTM conferences are listed online at www.nctm.org/meetings/index.htm#regionals.

Seeking New Student Affiliates

An active group of 10 or more preservice teachers with an interest in the teaching of mathematics meet the criteria for becoming an NCTM student affiliate. Visit the online resource center at www.nctm.org/affiliates/resource and click on Becoming an Affiliate for specific criteria for affiliation, or contact Affiliate Services at affiliates@nctm.org and request the student affiliation application packet.

MCATA Executive 2004/05

Len Bonifacio	President
Sandra Unrau	Past President, 2004 Conference Program Chair
Shauna Boyce	Vice President, Director of Publications
Janis Kristjansson	Vice President, Director of Professional Development
Donna Chanasyk	Secretary
Elaine Manzer	Treasurer
Geri Lorway	Director of Grants and Awards
Sharon Gach	Director at Large
Martina Metz	Director at Large
Charlotte White	NCTM Representative
Anne MacQuarrie	Newsletter Editor
A. Craig Loewen	<i>delta-K</i> Editor
Daryl Chichak	Membership Director
Robert Wong	Web Technician
Deanna Shostak	Alberta Learning Representative
Vacant	Faculty of Education Representative
Indy Lagu	Mathematics Representative
David Jeary	ATA Staff Advisor
Carol Henderson	PEC Liaison

For more information, please check our website at www.mathteachers.ab.ca.

Chocolate Mathematics

1. Pick the number of times a week that you would like to have chocolate (try for more than once but fewer than 10).
2. Multiply this number by 2 (just to be bold).
3. Add 5 (for Sunday).
4. Multiply by 50 (I'll wait while you get the calculator).
5. If you have already had your birthday this year, add 1754; If you haven't, add 1753.
6. Now subtract the four-digit number of the year that you were born. You should have a three-digit number. The first digit is your original number (how many times you want to have chocolate each week). The next two numbers are your age! (Oh yes, they are!)

This is the only year this will work, so spread it around while it lasts.

Alberta High School Mathematics Competition

MCATA is a sponsor of the Alberta High School Mathematics Competition. This competition is open to students in Alberta and the Northwest Territories and is designed for high school students, though students in earlier grades do occasionally take part. Prizes include books and scholarships, which range in value from about \$50 for Part 1 of the competition to \$1,500 for the major prize for Part 2.

Last year's winners were honoured at an awards banquet in Calgary on April 4, 2004.

For more information on mathematics competitions and the student award winners, visit the website at www.math.ualberta.ca/~ahsmc.

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