TEAMS
TORONTO EDUCATORS ASSOCIATION FOR MATHEMATICS

Effective Mathematics Education: New Approaches

Mini-conference presented by TEAMS for Elementary and Secondary Teachers

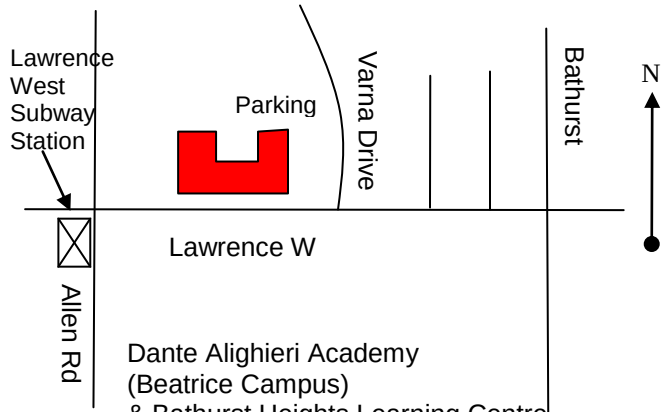
- 2 workshops
- catered dinner
- publishers' display
- door prizes

Thursday, October 28, 2010

Dante Alighieri Academy
(Beatrice Campus)
& Bathurst Heights Learning Centre
640 Lawrence Ave. W.
Toronto, ON
(1 block east of Lawrence West Station on the Spadina Subway Line)

Program

4:00 – 4:45	Registration, Publishers' Display
4:45 – 5:45	Workshop Session A
5:45 – 6:15	Publishers' Display in Cafeteria
6:15 – 7:00	Dinner in Cafeteria
	TEAMS Annual General Meeting
	Lucky Draws!!!!!!!
7:00 – 8:00	Workshop Session B



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Toronto, ON

Plenty of parking available at the rear of the school, or take the subway.

There will be draws for:

- **Numerous door prizes from our sponsoring exhibitors, worth over $1000.**
- **Free memberships in OAME**
- **Free registration for the 2010 TEAMS Fall Conference**

TEAMS is a local chapter of the Ontario Association for Mathematics Education (OAME)

CONFERENCE WORKSHOPS

Session A *4:45 - 5:45*

PRESENTER	TITLE/DESCRIPTION	TARGET AUDIENCE	SIZE
Gino DiPede, St. Patrick CSS, TCDSB	**Session A1: The Paper Folding Problem With TI-Nspire CAS** Simulation of the Paper Folding problem with TI-Nspire CAS. The upper left hand corner of a piece of rectangular paper (standard legal or portrait size) is folded to meet a point on its base. With repeated folds a right triangle is created in the bottom left hand corner. Our problem is to find the maximum area of that right triangle. Participants will be taken through the construction of this rich problem. The problem is simple enough for students in grade 9 to understand and to do. Grade 12 calculus students will be challenged to find the optimization equation modeling the situation. If students come up with the right equation, TI-Nspire Data Capture will confirm.	9 – 12	30
Tara Cook, Bonnie Macdonald, Instructional Leaders, TDSB	**Session A2: Assessing Learning Through Problem Solving** Growing success has put a focus on assessment for and as learning. This session will focus on intermediate students analysing their own learning styles, identifying their strengths and areas of need, while increasing problem solving skills by looking at real world applications of mathematics. We will adapt current text book problems and look at proven instructional strategies to help our students become more reflective and successful learners.	7 – 10	20
Betty Temmer, Retired	**Session A3: Autograph, The all-in-one math** This leading edge software is intuitive, highly visual and has the ability to replace all the other software programmes you are currently using. Features include 2D and 3D graphing (both implicit and explicit), dynamic geometry, statistics and probability, 2D and 3D vectors (great for the Calculus & Vectors Course), piecewise functions, and much more! With its built-in "whiteboard tools", Autograph is perfectly suited to interactive whiteboards and tablets.	9 – Post Sec	35
Peter Harrison, OISE	**Session A4: Cows in the Classroom** For a long time now, I have been interested in the intellectual transition that takes place when students start to think algebraically - if and when they ever actually do! I am convinced that this is a crucial period in the mathematical growth of students and, in my experience, as a high school teacher, I have observed that we are not particularly effective in facilitating this development. I don't presume to have the answer to this problem but I have developed a sequence of mathematical problems/puzzles that I think might be useful in addressing students' needs as they adapt their arithmetic skills to the more generalized sort of reasoning that they should experience when they start to think algebraically. I would like to share some of these problems during this presentation. Experience has shown that these problems are both entertaining and challenging. They are easy to understand but not always so easy to solve. The theme happens to be bovine and the subject matter will definitely leave you ruminating.	7 – 12	35
Laura Inglis, Nicole Miller, Oakridge JPS, TDSB	**Session A5: Problem-based instruction, assessment and evaluation for a student centered classroom** Are you looking for a way to take your students out of their textbooks and into the real world of Mathematics? This workshop will guide you through a series of cooperative learning tasks that allow the participants to grapple with the process of problem solving and sharing of solutions. We will also model how teachers may assess the work produced and how these assessments guide us to a student evaluation.	4 – 8	30

PRESENTER	TITLE/DESCRIPTION	TARGET AUDIENCE	SIZE
Stewart Craven, Retired	**Session A6: In the Face of Technology Do We Need to Be Numerate?** This interactive session will focus on what citizens need to know mathematically to be successful in their lives. If we as teachers do not understand how mathematics is really used, how can we possibly be relevant?	K – 12	30
Kathy Kubota-Zarivnij, Epiphany of Our Lord CS, TCDSB	**Session A7: Bansho: Developing a Collective Thinkpad (Beginner)** What does it really mean to teach and learn mathematics through problem solving? Come and learn about Ontario Bansho (a variation of Japanese Bansho), a key strategy for understanding and organizing student solutions for their learning of mathematics. A formative assessment tool will be used. This session is for beginners.	1 – 6	30
Anthony Levy, Math Coach, TDSB	**Session A8: Math and Technology - Let Your Fingers Do The Talking** The goals of this workshop are: •To discover how the internet can enrich your program •To explore how websites can differentiate your instruction •To learn about computer software programs that will strengthen your math instructional strategies	K – 8	20
Dan Montanaro, Precious Blood CS, TCDSB	**Session A9: Interact with Junior Math** This presentation will focus on using the SMART Board to allow students to interact with mathematical concepts at the junior level.	4 – 6	35

Session B *7:00 - 8:00*

PRESENTER	TITLE/DESCRIPTION	TARGET AUDIENCE	SIZE
Roland Meisel, Retired	**Session B1: Cheap CGI: Using The Geometer's Sketchpad for Computer Graphics Imagery** Films such as Star Wars or Avatar create many of their special effects using Computer Graphics Imagery. You can use The Geometer's Sketchpad to produce similar effects, even in 3D. This introductory CGI tutorial will consider morphing, animating a figure to walk, creation and 3D flight of a wire-frame model, and custom path creation. Some previous experience with GSP is helpful.	9 – 12	20
Edward Rego, Royal Orchard MS, Peel DSB	**Session B2: Bansho! And the Japanese Approach to Teaching Math.** Learn how to structure your math program using the Japanese lesson format, which places an emphasis on teaching through problem solving. Learn how to develop rich, open-ended problems and move from teacher-directed instruction to student-centered learning. Learn how to use story problems to frame your lessons and engage your students. The Japanese approach to teaching math lends itself well to differentiated instruction and will enhance your students' understanding of concepts.	4 – 12	35
Vera Sarena, Pleasant View JHS, TDSB	**Session B3: Historical approaches to linear equations: teaching strategies to facilitate your students' learning** Though algebra began very early in recorded history, old methods can provide practicing teachers with interesting contexts in which their students can learn how to write and solve equations. The presentation will highlight algebraic approaches from the ancient Egypt, Greece and Renaissance Europe. The presentation will provide listeners with materials that can be used directly in math classrooms.	6 – 10	35
Dan Montanaro, Precious Blood CS, TCDSB	**Session B4: Interact with Junior Math** This presentation will focus on using the SMART Board to allow students to interact with mathematics concepts at the junior level.	4 – 6	35

PRESENTER	TITLE/DESCRIPTION	TARGET AUDIENCE	SIZE
Wayne Erdman, Retired	**Session B5: Math Walks** You can see math around you with just a little effort. In this session, we will look at some successful examples of assignment questions based on a walk around the school grounds. We will then take a walk around the school to identify and discuss math problems that can be used for summative assignments or culminating projects. Bring your camera. This session is appropriate for grades 7 to 10.	7 – 12	25
Chi Chan, North Toronto CI, TDSB	**Session B6: Visualizing Mathematics** In this workshop, I will discuss how to use images generated mostly by interactive computer software to help learners to understand mathematics. The inspiration of the talk comes from Oliver Byrne's 1847 edition of The Elements of Euclid and Claudi Alsina and Roger B. Nelson's 2006 Mathematical Association of America publication Math Made Visual. Examples will be drawn from middle school to high school mathematics curriculum.	6 – 12	35
Kathy Kubota-Zarivnij, Epiphany of Our Lord CS, TCDSB	**Session B7: Bansho: Developing a Collective Thinkpad (Advanced)** What does it really mean to teach and learn mathematics through problem solving? Come and learn about Ontario Bansho (a variation of Japanese Bansho), a key strategy for understanding and organizing student solutions for their learning of mathematics. A formative assessment tool will be used. This session is for experienced Bansho practitioners or can be an extension to session A7.	1 – 6	30
Bart Vanslack, Wilma Simmons, Mathematics Resource Teachers, TCDSB	**Session B8: Assessment for Learning : Giving Students Effective Feedback** In this workshop, participants will be actively engaged in looking at assessment for learning. There will be a strong emphasis on the importance of descriptive feedback. Feedback that provides the students with precise information about what they are doing well, what needs improvement and what specific steps they can take to improve.	1 – 6	25
Olive Creary-Satchell, Nikki Arrindell, Amesbury MS, Amy Craig, Dixon Grove JMS, Melissa Hestick, Military Trail MS, TDSB	**Session B9: Assessment and Evaluation - Is this an "A"?** The participants will learn how to assess and evaluate in the Junior and Intermediate Math Classroom through the use of Differentiated Instructional Strategies, Math Journals, Learning Centres, and Rubrics.	4 – 8	25

"Mathematics is the supreme judge; from its decisions there is no appeal." ~Tobias Dantzig

"Pure mathematics is, in its way, the poetry of logical ideas." ~Albert Einstein

"If people do not believe that mathematics is simple, it is only because they do not realize how complicated life is." ~John Louis von Neumann

TEAMS is hosting the 2011 Ontario Mathematics Olympics for grade 7 & 8 students on June 3-4. If you are interested in helping out with this event, or are just interested in joining TEAMS, contact Wayne Erdman at wayne.erdman@gmail.com.

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New Approaches
TEAMS 2010

FALL CONFERENCE REGISTRATION

To better facilitate our large number of participants, TEAMS uses online registration.
You may safely pay online by credit card.

To register, please go to the Webpage http://www.oame.on.ca/mcis.
If you have an OAME / MCIS registration number, simply enter it along with your password.
If you do not have a registration number yet, click on **Sign In** on the left panel of the Webpage.
After signing in, scroll down to the link for registering for the TEAMS conference,
Online Registration for TEAMS Fall Conference

COST (Includes Dinner):

- ☐ $30.00 OAME Members.
- ☐ $35.00 Non Members
- ☐ $45.00 Same Day Registration
- ☐ $25.00 for Teacher Candidates

You also have the opportunity to join OAME or renew your membership online. If you prefer to pay by cheque, register at the above Website, and mail your cheque, payable to TEAMS, to:

TDSB or OISE:
Laurissa Werhun,
Parkdale C. I.,
209 Jamieson Ave.,
Toronto, ON,
M6K 2Y3
TDSB Route: SW

TCDSB or York U. Fac. of Ed.:
Monica Rohel,
Mathematics Resource Teacher,
Catholic Education Centre,
80 Sheppard Ave. E.,
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M2N 6E8

For information about our conference, email werhun@rogers.com or monica.rohel@tcdsb.org.

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