



Mathematics Council NEWSLETTER

The Alberta Teachers' Association

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President's Message

I would like to talk about teachers. Specifically, I'd like to talk about excellent teachers. Every one of us probably works with many excellent teachers in our schools. Unfortunately, great teachers don't often get the recognition they deserve. Are you aware that you can nominate a colleague for a Math Educator of the Year Award? I fear that we are not publicizing these awards enough, because despite the fact that there are talented and dedicated math teachers in all corners of this province, we have not been able to give out this award for the past two years because we haven't received any nominations. It's a shame to not recognize people who are doing such good work. Please consider nominating a colleague so that we can present these awards next year. Selection criteria and the nomination procedure are available on the MCATA website (www.mathteachers.ab.ca) under the About Us tab.

John Scammell

From the Editor's Laptop

I know by the time you read this, Christmas will be over, but I've been listening to Christmas carols all day and having fun thinking about some of the math. I haven't solved any of these problems yet, so feel free to pass on the answers or to think of more fun problems. The most common one I've run into is, How much do the 12 days of Christmas cost if you only give each gift once, or if you repeat the first gift on day two, the first and second on day three and so on?

But today I am wondering, if we consider just the cost of feed, is it more efficient for Santa to feed his reindeer for an entire year to use for one day or to buy a new set every year?

Or if Santa only travels to cities with a population of over 500,000 (or pick any number), how many kilometres does he have to travel? Connected to the previous problem, if Santa fed the animals all year, how many kilometres are travelled per kilogram of food eaten?

Hope you enjoy!

Karen Bouwman

Free Money for Math PD

MCATA grants are available for teachers and schools that plan professional development initiatives for their teachers that support current learning and teaching practices or current priorities as outlined by or through Alberta Education, local school districts, MCATA, NCTM, ATA or other reputable education associations. For more information, go to www.mathteachers.ab.ca/MCATA%20GRANTS%2005.htm.

Notice

You should have received this newsletter in two different formats. It was distributed electronically and through regular mail. If you did not receive this newsletter by e-mail, please check the spam folder of the e-mail address you used to get your MCATA membership and indicate to your e-mail client that we are not spam. You will find the electronic version of the newsletter in an e-mail from MathCouncilATA@gmail.com. Please add us to your address book so that future communications from us will get through. All future issues of the newsletter will be distributed electronically only.

Executive Meeting Minutes

September 11, 2015

As this was our last executive meeting prior to the joint conference with the Science Council, most of the meeting focused on the conference to make sure we were on top of our game plan. Three members of the executive presented at the Beginning Teachers' Conference in Edmonton and two presented in Calgary. Two director positions are vacant—special projects and director at large. If you are interested in serving as a director, please complete the application form on the MCATA website. The PD planning committee worked on the details for the 2016 and 2017 conferences. The publication committee announced that the January newsletter will be available in a digital format. John Nelson, the incoming treasurer, was a guest at the meeting.

November 28, 2015

This was the first executive meeting following a successful joint conference with the Science Council. The conference survey results showed lots of positive comments along with some suggestions for improvement in planning another joint conference. The next joint conference may be in 2018. In the meantime, discussions and decisions for the 2016 conference were on the agenda. The 2016 conference committee members were confirmed. The president's report recommended that MCATA should have a communication plan which includes a survey asking membership for feedback to help the executive make future plans. David Martin will be the director of special projects for the balance of the 2015/16 year. One applicant will be asked to serve as director at large. The tender application for the 2016 conference/symposium registrar was accepted from Patricia Chichak. The January newsletter will be sent to the membership by postal mail and e-mail. Welcome to John Nelson, who was elected by acclamation to the treasurer position in the spring election.

New Executive Members

John Nelson, Treasurer

John Nelson was elected by acclamation at the recent AGM to fill the role of treasurer. John has been teaching mathematics with the Edmonton Public School Board for the past eight years and currently teaches at M E LaZerte High School in northeast Edmonton.

As well as being keenly dedicated to his profession and learning, John is a cycling enthusiast and an avid bike polo player. John is married to Jody and lives in Edmonton with their two children.

Matthew McDonald, Art Jorgensen Recipient

Matthew McDonald is a recent graduate of the Werklund School of Education at the University of Calgary. He received a bachelor of education with a concentration in secondary mathematics. While at the

University of Calgary, Matthew had the opportunity to work with Olive Chapman and John Mason to develop his mathematical thinking and his views on mathematics education. Previously, Matthew worked as an iPhone application developer making use of the computer science degree he received in 2009 before returning to complete his education degree. Outside of education, Matthew has a passion for musical theatre and competitive curling. Recently Matthew received his first temporary contract and is teaching Grade 11 mathematics in Calgary. He is very excited to be a part of the MCATA executive council and looks forward to seeing how everything runs and helping out wherever he can.

Diane Stobbe, Alberta Education Representative

Diane Stobbe is the French K–12 mathematics team leader for the French and international education services sector with Alberta Education. Diane graduated from Campus Saint-Jean, University of Alberta, with a bachelor of education with a major in mathematics and a minor in French. After her first two years of teaching junior high French immersion in Peace River, Diane moved to Edmonton and taught junior high science and math in the French immersion and English programs. Wanting a new challenge, Diane moved on to teaching high school math and becoming a high school math department head. Life took another turn and Diane and her husband welcomed a daughter into their lives in 2002. Wanting to focus on her family, Diane made the difficult decision to resign from teaching for six years. During this time, she did contract work as well as taught night school and summer school. When a secondment opportunity opened up in the French education services sector for mathematics, Diane jumped at the opportunity to combine her passion with teaching math and curriculum development with the opportunity to work in French on a daily basis. In February 2012, Diane accepted a permanent position with Alberta Education. When not working, Diane enjoys reading, watching and playing soccer, and travelling.

Sandi Berg, Director at Large

Sandi Berg has taught every grade and almost every subject from K to 12. As a curriculum implementation support consultant at Central Alberta Regional Consortium, she is constantly increasing her repertoire of student-centred activities that make connections with the world, develop competencies and mathematical processes and focus on infusing literacy and numeracy within all curricular areas. Her favourite sessions are those that focus on practical, hands-on activities that can be used in the classroom tomorrow.

Friends of MCATA

Val Olekshy and Gladys Sterenberg were recognized as Friends of MCATA at the annual conference.

C³—Current Commentary by the Council

The place where council members comment on current topics.

Math Wars in Alberta

This is our response to the negative media coverage and parent concerns about the “new math” being taught in our schools. As experienced math teachers, we want to tell you why the current Alberta Mathematics Program of Studies (2007) is the beginning of an answer to the problem of math education. It is research based, child centred and focused on teaching for understanding. It focuses on developing number sense, mental math and estimation, reasoning, making connections and seeing patterns. It emphasizes developing mathematical thinkers and problem solvers who are confident in their math skills (including basic facts and operations). Under this curriculum, we have seen authentic learning, deep understanding, confident problem solving and joyfully engaged students. We have also seen confusion, fear and a number of challenges that need to be addressed.

How Do We Support the Program of Studies?

- Interpret and implement the curriculum in the way it was intended. The mathematics education research is solid and current.
- Support teachers so they can best support their students. This may include various professional development opportunities on a continuing basis, courses and resources.
- Support and educate parents: offer parent math nights, online courses and resources.
- Initiate a positive and educational media campaign.
- Engage EVERY student in mathematic classrooms.

Jo Boaler (2011, 15) states: “Moving from a procedural to a sense-making approach in mathematics is not straightforward for teachers; it takes commitment, training and time. But the outcomes of students ... suggest that such changes, no matter how hard they may be, are worthwhile in giving students a different and more positive start to their adult lives.”

Students deserve nothing less than our best concerted efforts to help build their future.

What Is Best for Students?

- A program of studies grounded in current research on mathematics education, child development and brain research.
- An approach that promotes flexibility, efficiency and fluency with numbers as well as deep understanding of number concepts and their relationships.
- An approach to mathematics that grows all students into mathematically literate adults with the important life skills to succeed in society.

- The assurance that teachers in Alberta are trained and confident to deliver our existing Alberta K–9 Mathematics Program of Studies.
- The assurance that parents are involved and supported in the learning of new math education strategies.
- To read more, please visit www.aliciaburdess.com/parents-and-math.html.

References

Alberta Education. 2007. *Alberta K–9 Mathematics Program of Studies with Achievement Indicators*. http://education.alberta.ca/media/645598/kto9math_ind.pdf (accessed December 16, 2015).

Boaler, J. 2011. “Stories of Success: Changing Students’ Lives Through Sense Making and Reasoning.” In *Focus in High School Mathematics: Fostering Reasoning and Sense Making for All Students*, ed M E Strutchens and J R Quander, 1–15. Reston, Va: National Council of Teachers of Mathematics.

Alicia Burdess and Jessie Shirley

Conference 2016

“Opening Your Mathematical Mind”

October 21–22

Coast Canmore Hotel, Canmore

Keep an eye on our website (mathteachers.ab.ca) for details and the speaker proposal form.

Dr Arthur Jorgensen Chair Award (Student Teacher Award)

A student teacher attending a faculty of education program in Alberta will be selected on the basis of demonstrated academic excellence and a clear commitment to mathematics education in either specialization in mathematics at the secondary level, or a keen interest and desire to expand mathematics knowledge at the elementary level.

Application forms are available at <http://mathteachers.ab.ca/dr-arthur-jorgensen-chair-award.html>.

Math Educator of the Year

Is He or She Sitting Next to You?

Do you work with an awesome math teacher? Is a colleague in another school your go-to resource when teaching math? Exemplary classroom teachers in K–12 as well as teachers who have made exceptional contributions to the professional development of teachers can be nominated. For more information or for a nomination form, go to <http://mathteachers.ab.ca/alberta-mathematics-educator-award.html>.

Alberta Education Submission

In the 2015/16 school year, a series of learning opportunities will be offered across the province at no cost to teachers and will also be available for preservice teachers. These learning opportunities will provide additional support to teachers in the areas of mathematics content, assessment, choices for instructional practice, resources and communicating with parents. These learning opportunities will extend throughout the 2016/17 school year and beyond. Check the ARPDC Learning Portal or contact your Regional Consortium for updates and registration.

The first in the series of instructional and collaborative professional learning experiences was Insight into Equality. Visit <http://learning.arpdc.ab.ca/course/view.php?id=351> to view the archive of this foundational webinar and to discover a multitude of resources to support deeper reflection.

Here are the next webinars:

- Operations:
Multiplicative Thinking: January 18, 2016 at 1 PM and 4 PM
- Assessment in Mathematics: Foundational Webinar will be offered the week of February 22, 2016
- Instructional Practices in Mathematics: Foundational Webinar will be offered the week of May 2, 2016

Check the CARC website (<https://carcpd.ab.ca/en/welcome-to-carc>) for registration information.

For more information or if you have questions about the mathematics programs of study and resources, please contact Kathy McCabe, Team Leader, Mathematics, Programs of Study and Resources Sector, at 780-422-5079, e-mail Kathy.McCabe@gov.ab.ca; or Diane Stobbe, Team Leader, Mathematics, French Education Services Sector at 780-427-7489, e-mail Diane.Stobbe@gov.ab.ca.

Assessment

Diploma Programs

- Mathematics 30-2 is offering an additional administration in April 2016 for the first time. This diploma exam will be administered exclusively in a digital format using Quest A+, and all writers must preregister and have a final school-awarded mark.
- The section of the diploma exam instruction pages describing the time students are allowed to write the

exam has been simplified to three hours. There is no change to the design of the exams.

- Teacher perusal rules have been adjusted so that Grade 12 teachers who will teach a course with a diploma exam at any point in the school year may peruse that particular diploma exam, under the supervision of the principal or designate. The security of diploma exam questions before, during and after a perusal session continues to be of utmost importance.
- Assessment highlights from last year's diploma exams can be found in the commentary section in the Mathematics 30-2 Information Bulletin.
- In addition to digital field tests, Mathematics 30-2 is offering year-end field tests in a hybrid format this year, either 60 minutes or 180 minutes in length. Mathematics 30-2 is also offering two topic field tests. One topic field test will cover the specific outcomes in Logical Reasoning and Probability, and the other topic field test will cover the specific outcomes in Relations and Functions.

For more information, please contact Jenny Kim, Team Leader, Mathematics 30-2, Provincial Assessment Sector at Jenny.Kim@gov.ab.ca or 780-415-6127 (dial 310-0000 first for toll-free access in Alberta).

Sharing the Expertise

Have you considered sharing something with *delta-K*, the journal of the Mathematics Council? Submissions are always appreciated, and although it contains peer-reviewed articles we also include other content such as discussion starters in the mathematics and numeracy field, teaching ideas or activities as well as book or website reviews. If something is of interest to you or is working in your mathematics classroom, please submit it to *delta-K* so we can share it with other mathematics teachers! Contact Lorelei Boschman at lboschman@mhc.ab.ca.

TERM Meetings

TERM (Teachers of Mathematics in the Edmonton Region) will be meeting on Monday, April 11, 2016. Location and time will be announced at a later date. Please contact Donna Chanasyk at donnajc@telus.net for details.

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