

Mathematics Council NEWSLETTER The Alberta Teachers' Association

Volume 15

Number 4

April 1997

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

Inside

From the President's Pen

Criteria for Awarding Grants for MCATA Sponsored Institutes

Keep Us Posted!

The Two Cs in Mathematics

ATA Educational Trust

From the Editor



The World's Largest Math Event (WLME) is slated for April 30, 1997, with the theme "Mathematics: The Language of the Universe." This year's theme, is quite appropriate in light of the joint NCTM-NASA project called Mission Mathematics. The project will appear in April—mathematics month—and will consist of a set of K-12 classroom activities based on the pioneering efforts of NASA and the space program. The materials should be available from NCTM.

Why not get your students involved with some interesting math activities in order to promote WLME? After all, promoting the value of mathematics to students is the responsibility of every teacher. On Wednesday, April 30, we ask that you broaden your role to include promoting mathematics to the local community through the media.

The following steps will help you obtain media coverage for the event—coverage that will show the positive activities taking place in your class and in your school.

- Make a list of all the local media you want to reach, including newspapers and radio and television stations.
- Identify the reporters who cover education issues for the newspaper and radio and television stations you want to reach.
- Write a short (one-page) media alert for your local press. Be sure to include who, what, when, where, why and how. (Note: A media alert is much easier to write than a press release, because it is composed of short tidbits of information.) Type your media alert on your school's letterhead. Be sure to include a contact name and phone number, enabling interested reporters to contact you easily. Mail the release approximately one week before the event, to give reporters time to check their schedules and gather any additional information they may need in order to cover the story.
- If you do anticipate coverage by your local media, be sure to get parental permission for children to be photographed and interviewed prior to the event date. This will save reporters time and earn you their gratitude.

How about letting Klaus or me know about your activities? •

From the President's Pen



A number of professional development activities have been—and are being—organized by members of the Mathematics Council of the ATA Executive. These initiatives support our focus to provide leadership and coordinate professional development opportunities to

all our members. Unfortunately, not all activities are readily available to all MCATA members. If some are of interest to you, the Council will endeavor to locate such an activity in your area.

Nominations for MCATA Table Officer positions are invited. If you or your colleagues so desire, please express your interests by submitting an appropriate nomination form.

As the year progresses, the executive is attempting to stay abreast of the needs of our membership. We invite you to identify and express any issues, needs and requests to any member of the executive.

-George Ditto

The Two Cs in Mathematics



Eighty percent of the jobs that will exist in the year 2000 do not exist today. And by the year 2000, calculators and computers—the two Cs—will be necessities, not only in the work-place but also in the home and in the classroom.

This technological boom is forcing us to rethink education. The basics of tomorrow will be drastically different from the basics of today.

The simplest calculator can quickly add, subtract, multiply and divide. Computers and sophisticated calculators can manipulate numbers, chart graphs and organize data in order to analyze mathematical models. Students need mathematical understanding so that they know how to examine data, what questions to ask and what procedures should be used.

The curriculum, teaching and assessment standards issued by the National Council of Teachers of Mathematics reflect our technological world and the need for children to understand it better. The goals of these standards ultimately are to provide all children with an education in mathematics that will help them become more productive members of society and help them share in its benefits.

Students who use calculators along with traditional instruction can improve their basic skills with pen and paper. Used effectively, calculators and computers are tools to enhance discussion, not machines to replace a child's thinking.

The NCTM recommends that all students use calculators to do the following:

- Concentrate on the problem-solving process rather than on the calculations associated with the problem.
- Explore, develop and reinforce concepts including estimation, computation, approximation and properties.
- Perform tedious computations that arise when working with real data in problem-solving situations.

Your child can enhance his or her mathematical skills by using the calculator for various mathematical tasks and activities. For example, working in pairs, pick a six-digit number with no zeros. Then take turns thinking of and subtracting a number that has only one digit that's not a zero. Whoever gets the number down to zero first is the winner. This activity reinforces place value.

> -Gail F. Burrill, President, NCTM

Reprinted with permission from the NCTM. Minor

alterations have been made to spelling and punctuation to fit ATA style. For a complimentary copy of NCTM's "Mathematics: Making a Living, Making a Life, "write to NCTM, 1906 Association Drive, Dept. I-NEWS, Reston, VA 20191-1593.



Extra Challenge for High School Students

3

If students have finished Math 31 and are still in high school, they can take a mathematics course at the University of Alberta as an Open Studies (Unclassified) student. Students may do this to get a head start on their programs, or just for the experience of challenging a university course.

If they have completed an AP or IB program in Mathematics and plan to come to the University of Alberta, the Department of Mathematical Sciences can give them a placement exam—without charge to assess whether they can skip a course as a prerequisite or actually receive university credit for a course.

Interested students can call the Department of Mathematical Sciences at 492-3395 for information on courses: descriptions, textbooks and sample examinations. We can also discuss which of our introductory courses would be most appropriate for them. •

Mini-Conference: A Most Successful Event

On Saturday, February 1, 1997, a junior high school mathematics mini-conference was held in Calgary. It was jointly sponsored by the Calgary Board of Education, Calgary Roman Catholic School District, Alberta Science Foundation and MCATA. More than 100 teachers from Calgary and surrounding districts attended. Twenty-two different sessions in four time slots were offered, and feedback from participants was very positive. Participants stated that the sessions were interesting, informative, practical, worthwhile, excellent, wonderful, great, useful, exciting, motivating, and, that they would like more opportunities of this type! Thanks to all the organizers and presenters.

A Math Problem to Try Scheduling

A t certain times charities call households offering to pick up used items for sale in their stores. They often do a particular geographic area at a time. This problem, once they know where the pick ups are, is to decide on the most efficient routes to make the collections. Find out how they do this and investigate improving these procedures. A similar question can be asked about snow plows cleaning city streets or garbage collection.

References: Euclidean tours, Chinese postman problem—information can be found in most books on graph theory, but one of particular interest is Mehdi Behzad and Gary Chartrand, *Introduction to the Theory of Graphs* (Allyn & Bacon, 1971.) •

Submitted by Katherine Heinrich, Canadian Mathematics Society President.

Are You Ready?

A re you ready to participate in a most exciting math conference? The NCTM Regional Conference will be held in Calgary during the period October 24–26, 1998. The program committee is busy putting together a super program. They would appreciate presentations form MCATA members and their colleagues. There are many among you who are doing great things with students, and the committee would like to hear about them.

How about completing a speaker proposal and sending it to Richard Kopan?

Naturally, part of the overall program will be several interesting social activities (as we well know Calgary can put together).

Make sure to put these dates on your calendar for a great time. \blacktriangle

-Bob Michie and Richard Kopan

-Linda Brost

Creativity is allowing yourself to make mistakes. Art is knowing which one to keep. —Kim Hubbard

Criteria for Awarding Grants for MCATA Sponsored Institutes

Grant applications from members of MCATA up to a maximum of \$500 must be made in writing to the Conference Director, MCATA. They must be received by December 1 or May 1, in order to be considered for the following six-month period. Grant applications will be approved for mathematics education initiatives which are in support of

- → current learning and teaching practices; or
- → current priorities as outlined by or through Alberta Education, local school districts, the MCATA, NCTM, ATA or other reputable educational associations.

The institutes/projects will be judged on

- \rightarrow the nature of the project,
- → the audience which will participate or benefit and
- diversity in regional development opportunities for teachers.

Grants are to be used for professional development, research directed toward mathematics education, or other initiatives which promote and enhance mathematics education in the province. They are intended to be applied directly to costs incurred in facilitating professional development opportunities. These include defraying the costs of presenters and participants to attend, and print materials required to facilitate the professional development. Grants shall be used for the purchase of equipment and/or capital expenditures or honoraria.

Special consideration will be given to first-time applicants.

Upon completion of the institute/project, a written summary must be sent to the MCATA Conference Director. Successful applicants must be willing to share their results and experiences via the *Mathematics Council Newsletter*, mini-conferences and/or conferences.

Acknowledgement regarding funding from MCATA, should be made where appropriate.

Applications will be considered by the MCATA executive at the January and June meetings each

year. Applicants will be notified of the decision by February 15 (for the December 1 applications) and June 15 (for the May 1 applications).

Application forms are available from the MCATA Conference Director.

Keep Us Posted!



A s members of the MCATA executive, we need to

communicate with mathematics teachers in Alberta to ensure that they are aware of events and activities that are occurring which are relevant to their work. We ask that you send information that you would like included in the *Mathematics Council Newsletter*—from both your geographic and grade levels.

Deadlines: The newsletter will be printed five times this year, and (depending upon printing time) will be distributed in the third or fourth week of October, December, February, April and June. Material must be submitted by the last day of the *previous* month to be included.

Upcoming Events/Activities

Description:

Past or Ongoing Professional Development Opportunities

Were you involved in—or are you involved in—a professional development session/activity? Share with the larger mathematics community how it went or how it is going.

Description:	
Teacher/Contact:	
School:	

Fax this information to Linda Brost at 294-6301, or e-mail it to her at lgbrost@cbe.ab.ca by September 30, November 29, January 31, March 31 or May 30. Please note that this information is to included in the newsletter (and may, at some time, be included on our home page). Other articles and materilas to be included in *delta-K* are to be submitted directly to Art and Klaus. \blacktriangle

Did You Know?

The Mathematics Council of the ATA and Calgary Regional Consortium will be holding an elementary math mini-conference on April 26, 1997. Sessions go from 9 a.m. to 2:30 p.m., and teachers preregister for three 90-minute sessions. Speakers will share practical classroom activities which relate to the Western Canadian Protocol. For further information, or to register, contact Cathy Taylor at 230-1431, fax 230-8488.





ATA Educational Trust

MCATA encourages its members to participate in the ATA Educational Trust. The Trust is a unique organization in education, which has as its aim the enhancement of the educational practice. Founded by teachers for teachers, its objectives and activities are contained in the enclosed insert.

The main objectives of the Trust are to encourage and fund educational research and innovative classroom projects, and to reward teachers who work to upgrade their education and improve their teaching skills. This year the Trust is celebrating 20 years of service to Alberta teachers.

Research and project proposals are requested through advertisements in February and March issues of *The ATA News*. This year, applications will be accepted until April 25. Successful applicants will be able to commence a project or research during the summer and progress through the school year until June 1998. For each project a final report will be submitted to the Board of Trustees and later retained in the ATA library.

There are seven members on the Board of Trustees—K. B. Thomas, chair (Westwind), D. J. Garvey (ATA executive assistant), E. M. Gouthro (Calgary Public), C. M. Kerr (Edmonton Public),L. J. Koran (Holy Spirit Catholic), M. Lovejoy (Alberta Retired Teachers' Association) and D. G. Root (Alberta Home and School Councils' Association). ATA staff B. P. Jordan and V. A. Bigeat serve as administrator and secretary respectively. Representatives from specialist councils and the Department of Education serve as members of subcommittees adjudicating project grants.

Please read the ATA Educational Trust insert for details about the Trust, its operation and award programs. Copies of our project application form are enclosed, as well as our call for submissions and for possible publication in your newsletter or journal.

If you need further information, contact Violette Bigeat, secretary to the Trust, at the ATA (447-9494 in Edmonton or 1-800-232-7208 from elsewhere in Alberta).

-Kelly Thomas, Chair, ATA Educational Trust



The ATA Educational Trust

Call for Submissions

Project and Research Grant Program

Through this program the Trust encourages teachers and others to share their successful classroom projects and innovative teaching practices, and to research developments in education or society that have a direct impact on teaching practices. The Trust may also cofund with others in education (universities, school divisions, agencies) the production of professional teaching resources.

Proposals are sought for:

- The production of educational resources to facilitate teaching.
- Innovative classroom projects in any area of the curriculum.
- · Research projects directed to any area of educational interest or concern.
- Program and resource development for special needs students from multiple-handicapped and learning disabled to gifted and talented.
- Projects to help teachers improve the reading and writing skills of elementary students.

Every project and research must result in a practical teaching resource, or in a final report useful to the individual classroom teacher, two copies of which will be placed in the ATA library.

The deadline for receipt of all applications is Friday, April 25, 1997.

In early June a number of proposals will be selected on their merit. The amount of each grant, to <u>a maximum</u> of \$2,500 each, will be determined by the Board based upon the detailed budget submitted by the applicant. The grant money is intended to help with the necessary expenses incurred to conduct the project and produce a final report or teaching resource. The individuals working on the project or research will be acknowledged for their initiative and benevolent work with award certificates and articles in *The ATA News*.

The grants will be officially awarded in the fall once all the projects are under way. They will be payable against receipts for expenses incurred between June 15, 1997 and August 31, 1998.

Instructions for the submission of grant applications are available from your ATA local, or from The ATA Educational Trust (address above). You may also fax your request to (403) 455-6481.

For detailed information on the ATA Educational Trust and its award programs please refer to the January 14, 1997, issue of *The ATA News*.



Call for Applications

Bursary Awards

The ATA Educational Trust invites those who meet the criteria below to apply for a bursary. In early June, up to 30 qualified applicants will be chosen through a random selection process. Bursaries will be paid, after course completion, against receipts for tuition and course materials.

To qualify for a \$750 bursary applicants must

- 1. hold a permanent Alberta teaching certificate;
- 2. have a minimum of five years teaching experience;
- be accepted into a recognized postgraduate study program;
- be planning to take courses that are part of this program over the summer or in the upcoming school year;
- have, or have had, special involvement in education at the school, school board, community or provincial level;
- be serving, or have served (sometime in the past five years), in some official capacity with the ATA at the local or provincial level;
- 7. obtain a letter of recommendation from a direct supervisor; and
- fill out an application form and send it to the ATA Educational Trust with the letter of recommendation attached.

Note: Teachers can only receive this \$750 bursary once.

To qualify for a \$300 bursary applicants must

- 1. hold a permanent Alberta teaching certificate;
- be planning to take a course related to their teaching responsibilities in the upcoming summer or school year that is not part of a postgraduate studies program;
- 3. explain why they wish to take a particular course;
- provide course details (description, date, cost, location);
- obtain from a direct supervisor a letter of recommendation for taking this course; and
- fill out an application form and send it to the ATA Educational Trust with the letter of recommendation attached.

The deadline for receipt of applications is Friday, April 25, 1997.

Application forms are available from your ATA local, or from The ATA Educational Trust, 11010 142 Street NW, Edmonton AB T5N 2R1 (Fax: 455-6481).

MCATA Executive 1996–97

President	
George Ditto	Res. 289-1709
610 18 Avenue NW	Bus. 777-7860
Calgary T2M 0T8	Fax 686-1055
2 g	ditto@cbe.ab.ca
e	
Past President	
Wendy Richards	Res. 482-2210
12207 Jasper Avenue NW Suite 705	Bus. 483-3415
Edmonton T5N 3K2	Fax 489-2192
X ² : Destile to	
vice Presidents	D 190 0091
Florence Glanfield	Res. 489-0084
8215 169 Street NW	Fax 483-7515
Edmonton T5R 2W4	
glanfield@gp	u.srv.ualberta.ca
Richard Kopan	Res. 254-9106
72 Sunrise Crescent SE	Bus. 777-7520
Calgary T2X 2Z9	Fax 777-7529
rik	opan@cbe.ab.ca
5	
Secretary	D 455 0550
Donna Chanasyk	Res. 455-3562
Edmonton T5M 2M1	Bus. 459-4405 Eax 450 0187
Editioniton 1 JWI 2111	rax 439-010/
Treasurer	
Doug Weisbeck	Res 459-8464
49 Westwood Drive	Bus 434-9406
St Albert T8N 3M1	Eax 434-4467
St. AIDERT TORY SWIT	1 ax +34-4407
NCTM Representative	
TBA	
Communications Director	
Betty Morris	Res 466-0539
10505 60 Street NW	Rus 441 6104
Edmonton TCA 21.1	Dus. 441-0104
Edmonton 16A 2L1	Fax 425-8759
Newslatter Editor	
Art Jorgensen	Pec 723 5370
All 5 Avenue	Eox 723-3310
4411 5 Avenue	rax 125-2414
Edson I/E IB/	
Journal Editor	
Klaus Puhlmann	Res 795-2568
PO Box 6482	Bus, 723-4471
Edson T7E 1T9	Fax 723-2414
klaur	ouhl@gyrd.ab.ca
Demontment of Education Demonstration	
Department of Education Representative	Page 158 6275
Student Evaluation Branch	Rus 427-0010
11160 Jasper Avenue Box 43	Fax 422-3206
Edmonton T5K 0L2 kmelville	@edc.gov.ab.ca
Conference Director	
Cynthia Ballheim	Res. 278-2991
612 Lake Bonavista Drive SE	Bus. 228-5810
Calgary T2J 0M5	Fax 229-9280
ball	eimci@aol.com

1997 Conference Chair	
Margaret Marika	Res 433-0692
0756 73 Avenue NW	Bus 462-3322
Edmonton T6E 1B4	Eax 462-7803
Editoritori TOE TB4	1°ax +02-7005
1998 Conference Chair	
Bob Michie	Res 246-8597
140 Wimbleton Crescent SW	Rus 280 0241
Colorer T2C 212	Eax 777 7200
Calgary 13C 3J2	rax ///-/309
	omicnie@coe.ab.ca
Mathematics Depresentative	
Michael Store	Dec. 296 2010
Michael Stone	Res. 280-3910
4/2 Math Sciences Building	Bus. 220-3964
University of Calgary	Fax 282-5150
2500 University Drive NW	
Calgary T2N 1N4	mgstone@acs.ucalgary.ca
Foculty of Education Donnecond	tativo
Dale Burnett	Res 381-1281
Faculty of Education	Bus 329-2416
University of Lethbridge	Fax 329-2252
Lethbridge T1K 3M4	
	burnett@hg.uleth.ca
Membership Director	
Daryl Chichak	Res :450-1813
1826 51 Street NW	Bus 463-8858
Edmonton TGL 1K1	Eax 461 0414
Editoritori TOL TKT	Fax 401-0414
Education Director	
Cindy Maaghar	Bee 520 1200
Childy Meagher	Res. 539-1209
SUIS IUS Street	Bus. 539-0950
Grande Prairie T8W 2A3	Fax 539-4709
	meagfam@terranet.ab.ca
Public Relations Director	D
Linda Brost	Res. 239-3432
151 Country Club Lane	Bus. 294-8616
Calgary T2M 4L4	Fax 294-6301
Regional Activities Director	
Sandra Unrau	Res. 284-2642
11 Hartford Place NW	Bus. 777-6110
Calgary T2K 2A9	Fax 777-6112
	sunrau@cbe.ab.ca
PEC Liaison	
Carol D. Henderson	Res. 256-3946
860 Midridge Drive SE Suite	521 Bus. 938-6666
Calgary T2X 1K1	Fax 256-3508
Sugary Part Int	an 250-5500
ATA Staff Advisor	
David L. Jearv	Bus. 265-2672
SARO	or 1-800-332-1280
540 12 Avenue SW Suite 200) Fax 266-6190
Calgary T2R 0H4	

Copyright © 1997 by The Alberta Teachers' Association (ATA), 11010 142 Street NW, Edmonton, Alberta T5N 2R1. Unless otherwise indicated in the text, reproduction of material in *Mathematics Council Newsletter* is authorized for classroom and professional development use, provided that each copy contains full acknowledgment of the source and that no charge is made beyond the cost of reprinting. Any other reproduction in whole or in part without prior written consent of the ATA is prohibited. *Mathematics Council Newsletter* is published several times yearly by the ATA for the Mathematics Council. Editor: Art Jorgensen, 4411 5 Avenue, Edson, Alberta T7E 1B7. Editorial and production services: Central Word Services staff, ATA. Address all correspondence to the editor. Authors' opinions are not necessarily those of MCATA or the ATA. ISSN 0823-117

Nominations for MCATA Executive Positions

Nominations for the following offices for the 1997-98 school year are now being accepted:

- President
- Vice-President (2 positions)
- Secretary
- Treasurer

To nominate a candidate, complete the form below and mail it to Wendy Richards, 12207 Jasper Avenue NW Suite 705, Edmonton T5N 3K2 by April 21, 1997.

If an election is necessary, it will be conducted by mail; ballots will be sent to all members in May.

Ensure an active council by nominating people who will take an active part in making the Mathematics Council benefit all mathematics teachers.

MCATA Executive Nomination Form

We, the undersigned members of	of MCATA, nominate
as a candidate for the office of _	in MCATA for the year 1997–98.
Signatures and addresses of two	nominators
Name	Address
	MCATA Membership Number
Name	Address
	MCATA Membership Number
Include a brief resume of the no	minee's qualifications for this position on the reverse side of this sheet.
I accept this nomination	
	(signature of nominee)
Home Address	Phone Number
Work Address	Phone Number
MCATA Membership Number	



INSTRUCTIONS FOR SUBMISSION OF GRANT APPLICATIONS

(Deadline for receipt: Third week of April)

Before you apply for an ATA Educational Trust grant, please read the information at the back of this page very carefully.

Proposals are sought for the following kinds of projects or research:

- Development of educational resources to facilitate teaching.
- Innovative classroom projects in any area of the curriculum.
- Program and/or resource development for special needs students from multiple-handicapped and learning disabled to gifted and talented.
- Innovative projects to help teachers improve the reading and writing skills of elementary students.
- Research projects directed to any area of educational interest or concern.

FRONT PAGE:

The front page of your application should start with a project or research name, and continue with the following information: applicant or applicants' (maximum 4) name, school or organization's name and address, work and home phone numbers, fax numbers. You may also include other relevant information such as the Grade level at which you teach, the number of years you've been teaching, etc...

NEXT TWO PAGES:

Summarize your project or research proposal using these four headings:

- 1. Justification and objectives (Why this project or research)
- 2. Plan and timeline (How do you plan to conduct your project or research? Who will be involved, where, when and how?)
- 3. Detailed budget (What expenses will you incur? Please give an itemized account, justifications if necessary, and indicate other sources of funding.
- 4. Final report (Describe the final report or teaching resource to be produced).

Sign and date your three-page application, add a recommendation letter from a direct supervisor who supports your project, and <u>mail 4 copies</u> to the ATA Educational Trust to be received no later than the third week of April. The deadline will be applied to strictly. Do not fax your application at the last minute: originals are best.

All applicants will be advised of the Board's decision in early June.

You may enclose <u>one copy</u> of background documents in support of your application: further details or clarification, sample of work, brief curriculum vitae, etc.



PROJECT AND RESEARCH GRANT PROGRAM

The purpose of the ATA Educational Trust grant program is to help fund the production of innovative teaching resources arising from the initiative of individual classroom teachers and others in the field of education, and to place these practical teaching resources or final reports in the ATA library to be borrowed by interested teachers. The Trust may also co-fund the production of professional teaching resources with others in education (universities, school divisions, agencies).

Through this program the Trust wishes to encourage teachers and others to share their successful classroom projects, innovative teaching practices and important information on new issues in education by providing the following incentives: the selected grant recipients are rewarded for their initiative and benevolent work with an award certificate and a write up in *The ATA News*; the grant money helps with the necessary expenses incurred to conduct the project and produce a final report or teaching resource.

Early in the new year calls for submissions are placed in *The ATA News* and information is sent to all schools. <u>The deadline for receipt of grant applications is the third week of April</u>. In May a number of applications are selected for funding on their merit. The amount of each grant, to a maximum of \$2,500, is determined by the Board and based upon the detailed budget submitted. Note that capital expenditures, which are the responsibility of the school boards, should not appear in this budget. All applicants are advised of the Board's decision in early June.

The projects and research are to be conducted during the upcoming school year, though work may start in the summer. Official award presentations take place in October or November when all projects are underway and recipients have accepted in writing the grant offered toward the completion of the project and the production of the approved document. Each recipient is officially congratulated, presented with a framed award certificate and receives a cheque representing 40 percent of the grant amount. Pictures are taken for *The ATA News*.

Projects and research should be completed in June at the latest and the final report submitted to the Board on or before August 31st. The remaining 60 percent of the grant is paid, following receipt of two copies of the final document matching the description agreed upon and properly acknowledging the support of the ATA Educational Trust (registered name), against an expense statement for the entire project with receipts attached totalling at least the amount of the grant. Expenses incurred prior to the awarding of the grant are not eligible.

Once all the final reports have been received they are reviewed by the Board, placed in the ATA library and their availability to all teachers is announced in *The ATA News*. For the protection of the awardees the ATA Educational Trust holds the copyrights on its final reports unless it has been specified otherwise in the proposal, and if no transfer of the copyrights was requested by the authors to the Board before placement in the ATA Library.