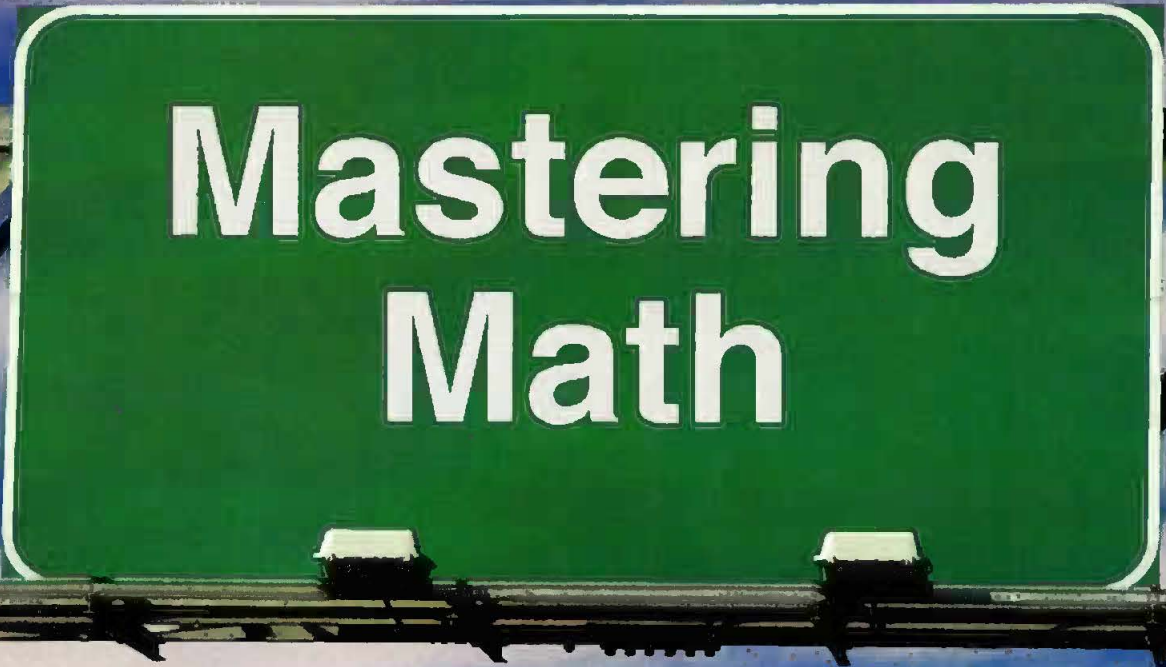


**delta-k**

Journal of the Mathematics Council of the Alberta Teachers' Association

Volume 53, Number 2

September 2016



**Mastering  
Math**

**Mathematical ideas = Springboard to learning**

# Guidelines for Manuscripts

*delta-K* is a professional journal for mathematics teachers in Alberta. It is published twice a year to

- promote the professional development of mathematics educators, and
- stimulate thinking, explore new ideas and offer various viewpoints.

Submissions are requested that have a classroom as well as a scholarly focus. They may include

- personal explorations of significant classroom experiences;
- descriptions of innovative classroom and school practices;
- reviews or evaluations of instructional and curricular methods, programs or materials;
- discussions of trends, issues or policies;
- a specific focus on technology in the classroom; or
- a focus on the curriculum, professional and assessment standards of the NCTM.

## Suggestions for Writers

1. *delta-K* is a refereed journal. Manuscripts submitted to *delta-K* should be original material. Articles currently under consideration by other journals will not be reviewed.
2. If a manuscript is accepted for publication, its author(s) will agree to transfer copyright to the Mathematics Council of the Alberta Teachers' Association for the republication, representation and distribution of the original and derivative material.
3. Peer-reviewed articles are normally 8–10 pages in length.
4. All manuscripts should be typewritten, double-spaced and properly referenced. All pages should be numbered.
5. The author's name and full address should be provided on a separate page. If an article has more than one author, the contact author must be clearly identified. Authors should avoid all other references that may reveal their identities to the reviewers.
6. All manuscripts should be submitted electronically, using Microsoft Word format.
7. Pictures or illustrations should be clearly labelled and placed where you want them to appear in the article. A caption and photo credit should accompany each photograph.
8. References and citations should be formatted consistently using *The Chicago Manual of Style's* author-date system or the American Psychological Association (APA) style manual.
9. If any student sample work is included, please provide a release letter from the student's parent/guardian allowing publication in the journal. The editor will provide this letter on request.
10. Letters to the editor, description of teaching practices or reviews of curriculum materials are welcome.
11. Send manuscripts and inquiries to the editor: Lorelei Boschman, c/o Medicine Hat College, Division of Arts and Education, 299 College Drive SE, Medicine Hat, AB T1A 3Y6; e-mail [lboschman@mhc.ab.ca](mailto:lboschman@mhc.ab.ca).

---

---

### MCATA Mission Statement

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

**CONTENTS**

From the Editor's Desk	3	<i>Lorelei Boschman</i>
<b>CONVERSATION STARTERS: ISSUES IN THE FIELD</b>		
How I Abolished Grading	4	<i>David Martin</i>
Math That Feels Good	6	<i>George Gadanidis</i>
<b>PROBLEM-SOLVING MOMENT</b>	10	
<b>RESEARCH ARTICLES</b>		
Evaluation of the Tasks from <i>Math Makes Sense 8</i> : Focusing on Equation Solving	11	<i>Xiong Wang</i>
<i>Mathworks 12</i> : A Critical Analysis of Text	20	<i>Ellen Watson</i>
Making Sense of Problem Solving and Productive Struggle	26	<i>Paul Betts and Sari Rosenberg</i>
Automaticity: Building the Foundation for Mathematical Mastery	32	<i>Ronald Vanden Pol</i>
<b>TEACHING IDEAS</b>		
Ready, SET, Play: Learning Elementary School Mathematics Through an Attribute-Based Game	38	<i>Janelle McFeetors and Kaitlyn Ireland</i>
Today, You Are the Math Coach!	48	<i>Michelle Hilton, Shelley Strobel and Terry Freeman</i>
Time-Travel Days: Cross-Curricular Adventures in Mathematics	52	<i>Irene Percival</i>

*Contents continued on page 2*

Copyright © 2016 by The Alberta Teachers' Association (ATA), 11010 142 Street NW, Edmonton, AB T5N 2R1. Permission to use or to reproduce any part of this publication for classroom purposes, except for articles published with permission of the author and noted as "not for reproduction," is hereby granted. *delta-K* is published by the ATA for the Mathematics Council (MCATA). EDITOR: Lorelei Boschman, c/o Medicine Hat College, Division of Arts and Education, 299 College Drive SE, Medicine Hat, AB T1A 3Y6; e-mail [lboschman@mhc.ab.ca](mailto:lboschman@mhc.ab.ca). EDITORIAL AND PRODUCTION SERVICES: Document Production staff, ATA. Opinions expressed herein are not necessarily those of MCATA or of the ATA. Address correspondence regarding this publication to the editor. *delta-K* is indexed in CBCA Education. ISSN 0319-8367

Individual copies of this journal can be ordered at the following prices: 1 to 4 copies, \$7.50 each; 5 to 10 copies, \$5.00 each; more than 10 copies, \$3.50 each. Please add 5 per cent shipping and handling and 5 per cent GST. Please contact Distribution at Barnett House to place your order. In Edmonton, dial 780-447-9432; toll free in Alberta, dial 1-800-232-7208, ext 432.

Personal information regarding any person named in this document is for the sole purpose of professional consultation between members of The Alberta Teachers' Association.

**BOOK REVIEW**

*Genius at Play*, by Siobhan Roberts

58 *Timothy Sibbald*

**WEBSITE HIGHLIGHT**

NCTM's Illuminations Website

59 *Lorelei Boschman*

**CONFERENCE 2015 HIGHLIGHTS**

Awards

60

Keynote Speakers

61