

SHORT CIRCUIT

Newsletter of
the Canberra Mathematical Association INC

Coming Events:

May 20 *National Mathematics Day*

August 20-21 *CMA Annual Conference. Australian Catholic University—Mathematics, the latest model*

November 10 *CMA Annual General Meeting*

November 10 *The 314th day of the year—Pi day!*

FROM THE EDITORS

Welcome to the ~~middle~~ beginning, middle, end of term one. Time flies. Two CMA events have already happened: the beginning-of-the-year social get-together and a workshop on geometry by Barbara Clarke. More events are coming.

This is the first issue for 2011 of Short Circuit, the CMA newsletter.

We invite readers' contributions of material for publica-

tion and we invite your feedback. Suitable submissions could include:

- * Reports or commentary on events and developments
- * Short articles about mathematics education or about mathematics itself.
- * Problems, puzzles and educational activities suitable for primary, secondary and college students

* URLs and reviews of useful websites.

Short Circuit is jointly edited by Paul Turner and Jurek Paradowski.

Contributions can be sent by e-mail to paul.turner@ed.act.edu.au
6205 8104

or to jurek.paradowski@ed.act.edu.au

MATHEMATICS CURRICULUM IN THE ACT

(the story so far...)

Erin Gallagher

Where and When?

The Australian Curriculum – Mathematics was finalised as part of the Phase 1 for the Australian Curriculum and was ready for implementation by states and territories in Jan 2010.

Currently the K-10 Mathematics Curriculum is available completely online through the Australian Curriculum website, <http://www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10>

Having an online curriculum provides maximum flexibility in how the curriculum can be accessed. It has the ability for the user to tailor the viewing of the curriculum in multiple ways. It can be searched, ordered and printed in a similar personalised fashion.

The ACT Department of Education and Training has an

implementation strategy mapped out, indicating that mathematics curriculum should be adopted by year 7 and year 9 in 2011, and all other years in 2012. They have also provided mapping tools on the ACTDET website, mapping Every Chance to Learn document to the Australian Curriculum – Mathematics.

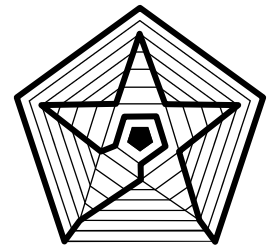
Senior Secondary curriculum for mathematics (Yrs 11-12) was released in a draft form for consultation on 14 May 2010 is still being finalised. There is currently no word on when the Senior Mathematics Curriculum may be finalised.

Benefits

There are a number of benefits associated with the development of a national curriculum. The sharing and development

of resources, not just within our own border but across the border and around Australia seems to one of the most beneficial. SCOOTLE is Canberra's depository and access point for electronic learning tools associated with the national curriculum.

The ability to access stronger and more closely aligned professional development for teachers who are teaching mathematics out of area could also be a major benefit. Although how this professional development pans out on the national landscape still remains to be seen. At last inspection, applications were only being sought from professional development providers on the basis that they would be able to develop professional devel-



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MEMBERSHIP

Membership of the CMA includes automatic affiliation with the Australian Association of Mathematics Teachers and a free AAMT journal.

Members are entitled to cheaper rates for CMA professional development events and the annual conference.

A membership application form for the CMA can be downloaded from our website:
www.canberramaths.org.au

Note:

Receipts for membership payments are normally sent out by e-mail. If you have paid for your membership but have not received a receipt or if your AAMT journal(s) have not been arriving, please advise CMA treasurer, Paul Turner, or a committee member.

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SHORT CIRCUIT

MATHS ACTIVE SCHOOLS

Congratulations to

Hawker College

Calwell High School

for their recent accreditation as
Maths Active Schools in the *silver*
category.



Schools who achieved Maths Active School status in 2010 will shortly be invited to retain their status in 2011 through a simple process of confirming their commitment to mathematics education.

They will also have the opportunity to upgrade their accreditation from bronze to silver or from silver to gold.

Is yours a Maths Active School?

If not, talk to Jurek Paradowski about what it means and how it's done.

PROBLEM

This problem is related to one published by the Australian Mathematics Trust.

*“Can the bug
travel in a straight
line?”*

A bug wishes to travel from the top left corner of a $m \times n$ grid to the bottom right corner. The bug is not permitted to pass through any lattice points but can cross any grid line and can change direction at will.

To make the number of grid cells that the bug passes through minimal, what extra constraint should be applied to the bug's movement.

If the bug wanted to complete its journey by travelling in a straight line, what restriction on the numbers m and n would be needed?

Suppose the bug having found a minimal path across the grid, not necessarily a straight line, is now programmed to pass through exactly k lattice points where k is less than the smaller of m and n . How does this affect the minimal number of grid cells visited?

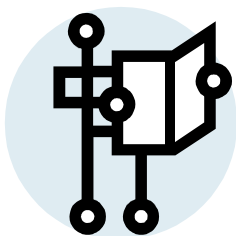
MATHEMATICS, THE LATEST MODEL

CALL FOR WORKSHOP PRESENTERS

CMA Annual Conference. Australian Catholic University—Mathematics, the latest model; August 20-21

Planning for the conference is well under way.

The organising sub-committee invites offers to present a workshop from anyone with an interesting idea or something to report about mathematics and its teaching. Contact any CMA committee member.



USEFUL LINKS

Australian Curriculum website: <http://www.australiancurriculum.edu.au/Mathematics/Curriculum/E-10>

CSIRO: Maths by Email: <http://www.csiro.au/resources/Maths-by-Email.html>

AAMT: <http://www.aamt.edu.au>

Mathematical Association of WA on-line quiz: <http://www.havesumfunonline.com>

From page 1

opment for ALL areas of the Australian Curriculum. One might have thought that getting specialist providers to provide professional development to their specialist area would have been an opportunity for high quality, engaging and appropriate professional development.

Challenges

Of course with every curriculum change comes many challenges. Challenges of recreating units of work, cross curricular approaches that blend specific topics together (as ordered by the national curriculum), changing existing plans and proformas and changing scope and sequences of current curriculum to match that of the Australian Curriculum. Most of these challenges are challenges for being time sensitive. Curriculum change is a slow process. Whilst implementation strategies, mapping documents and supposed timelines and timeframes exist, what really matters is that each change is thought through and purposeful, and that with each addition, alteration or amend-

ment we make in our classroom we always keep in mind that the real winners are our students. Help is available for curriculum consultation in mathematics, check out the DET website for details.

The last word

The author has been impressed with the growth of the document from its original draft version to this final form. With each revision and modification the mathematics sequence, structure and conceptual understandings were deepened and strengthened. It is definitely a great thing to have a strong mathematics curriculum, something which we are possibly moving closer towards; however one element that will always be missing from any written document is the excitement, rigour and enthusiasm surrounding its delivery. That my friends, is still in your hands!

(next issue – Australian Curriculum - Mathematics – looking at the sequence of fraction development K-10)

NATIONAL PROFESSIONAL STANDARDS FOR TEACHERS

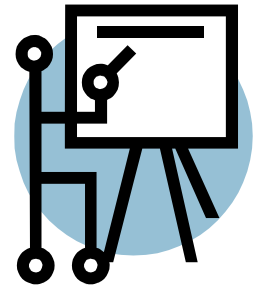
The National Professional Standards for Teachers were released by Education Ministers on 9 February 2011.

Further information about the Standards and a copy of the Standards document is available on the Australian Institute of Teaching and School Leadership website at the following link.

<http://www.aitsl.edu.au/national-professional-standard-for-principals-landing.html>

Or the following link goes directly to the Standards Document:

http://www.aitsl.edu.au/verve/resources/AITSL_National_Professional_Standards_for_Teachers.pdf



NATIONAL EDUCATION FORUM—FEBRUARY

Evelyn Ashcroft

The February meeting of the National Education Forum took place in Canberra. I attended, representing AAMT. Other representatives were from the National bodies of the professional associations e.g. AAMT, ALEA etc.

Session 1 was spent working in groups to compile a list of what PAs do. Most associations work in a similar way to AAMT in that they provide professional development for members, develop resources and act as a collective voice to government and the community.

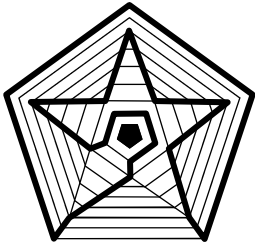
- * There was concern that a lot of teachers think PAs are like unions – so we need to fix our image in some quarters.
- * People are not happy that PAs are asked for expert advice but are not acknowledged in the documents produced e.g. the Standards. The Canberra rep of ALEA

suggested that since there are further amendments to come this oversight might be corrected then.

- * Delegates would like to see PAs given some funding as they have been in the past (they are jealous of Will Moroney's skill in getting money for AAMT)

Session 2 was given over to 15 minute talks from an AITSL rep, DET rep and Union rep followed by Q&A – Some people from smaller associations were upset as the AITSL and DET reps were suggesting that it was the responsibility of professional associations to translate the standards from a general document into one which applied to their subject area and this without recognition that PAs have no paid workers and that they have lots of other things to do.

Session 3 was mainly feedback from the morning groups. They asked for acknowledgement and some money to make things work. One Association reported a member of her PA's executive had stated that she was tired of being treated like a whore (but I've heard that whores get paid for their services). 😊



**NEWSLETTER OF
THE CANBERRA MATHEMATICAL
ASSOCIATION INC**

PO Box 3572
Weston ACT 2611
Australia

E-mail: canberramaths@yahoo.com.au

ABOUT THE CMA

The Canberra Mathematical Association (Inc.) is the representative body of professional educators of mathematics in Canberra, Australia.

It was established by, among others, the late Professor Bernhard Neumann in 1965. It continues to run - as it began - purely on a volunteer basis.

Its aims include

- * the promotion of mathematical education to government through lobbying,
- * the development, application and dissemination of mathematical knowledge within Canberra through in-service opportunities, and
- * facilitating effective cooperation and collaboration between mathematics teachers and their colleagues in Canberra.

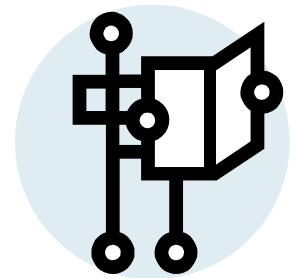
We're on the Web!

<http://www.canberramaths.org.au>

THE 2011 CMA COMMITTEE

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Office of Spatial Data Management
Melrose High School
Melrose High School
University of NSW—ADFA
Stromlo High School



*Q. What did the acorn
say when it grew up?*

A. Geometry.