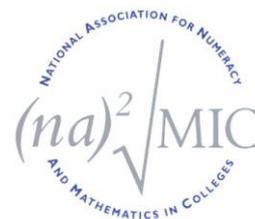


The Newsletter of the National Association for Numeracy and Mathematics in Colleges



An association for all in the Lifelong Learning Sector

“This has to be one of the best sources of info for teachers of maths in FE. I love the new website too.” Jane Imrie – Deputy Director of the National Centre for Excellence in the Teaching of Mathematics

Autumn 2013

NANAMIC Conference - July

Celebrating Mathematics Teaching with
NANAMIC and Malcolm Swan



The 20th NANAMIC Annual Conference took place in Derby on Wednesday 3rd July. Here are some of the reports, but

they can be found along with resources on our website: nanamic.org.uk/conferences

Keynote Address: Professor Malcolm Swan (Nottingham University)

As usual, Malcolm's presentation, on Classroom Challenges for Formative Assessment, was excellent and inspired many of us as he shared the findings of recent work he has been undertaking in U.S. schools. This was exciting as it is the first time that almost all states have agreed to adopt a united approach to the delivery of mathematics in schools.

He shared many of the resources and these can be found at:
<http://map.mathshell.org.uk/materials/pd.php>

Malcolm stayed to the end of the conference and answered questions from the floor. It was very difficult to bring it to a close!

Great Activities for Mathematics Enrichment and Support [GAMES] – Joe Murray

Joe gave some great ideas for tasks which would get learners actually thinking about and working out fractions and ratios, without them realising that was what they were doing. Often the mention of “ratio” is enough to upset some learners, but Joe gave a nice starter relating the consistency of custard to birthdays! This was a clever idea that could be adapted to suit all age groups, and before long the learners would be effectively comparing ratios.

There were some good visual aids for adding fractions, always a difficult area to explain effectively, but it seemed a nice natural way to lead learners into the concept of common denominators.

Joe provided several sets of cards including matching tasks and puzzle tasks involving algebra. These are always a good resource to get learners to work collaboratively and, again, are suitable for all age groups. There were some good starter ideas encouraging learners to look for number patterns and make predictions.

I really enjoyed this session and am looking forward to trying out the tasks on my students. My only criticism was the lack of time. I know Joe has a wealth of ideas to share and would love to have heard more.

Mathematics and Photographs - Richard Phillips

The basic idea is that we use a photograph as a starter for a lesson as it can build a link between the real world and maths.

The first example was a photograph of a Wall in Melbourne, Australia, which was covered in triangular tiles. A suitable problem for students is:- "What do the triangles have in common?"

Ideas which could be developed from this photograph include similar and congruent triangles, ratio, symmetry, transformations, and the properties of other two dimensional shapes.

Examples of other thought provoking photographs included:-

The Minimal Clock which consists of two hands only from which problems might be:-
"What is the time?"
"What is the angle between the hands?"

The Hoarding Heights photograph shows celebrity names displayed vertically to the same height as the celebrity. A problem for students is:- "What font size will be needed for you to write your name?"

A Conical Rain Gauge with possible problems:-

"Why is it this shape?"
"If it rains steadily then what will the graph of depth against time look like?"

Students should be encouraged to contribute their own photographs to the lessons. An example of this is a photograph of a Playground Meter taken (by a 6 year old) which could be used as a starting point for children to design their own meter.

Software, such as Sketchpad, enables us to sketch a graph over a photograph. The Hanging Chain photograph is an example of where Sketchpad will help when to discover the equation of the curve.

For more information and details of Problem Pictures and Richard's CD Rom's go to www.problempictures.co.uk

Kathy Brierley

The Operational Research Society - Louise Orpin

Ever heard of the Operational Research ("OR") Society? Nor had I. However, OR Education Officer Louise Orpin soon made us aware of the career option we have been missing, "the application of appropriate analytical methods to help make better decisions".

OR helps us to understand how things work, involves using maths to make things work more efficiently and provides techniques for solving practical problems.

Before we knew it we were solving a problem IKEA must grapple with daily – how many chairs and tables to make and the most cost effective combination of each, faced with limited resources. In our case we were supplied with a set of Lego bricks and instructions for how to make said chairs and tables. Using graphical representations we checked our findings. Before long we were quite appreciative of the work that goes into filling those IKEA warehouses and how OR might have an impact.

Louise can arrange for schools, colleges and groups to be visited by members of the profession to spread the word about career options in OR and if they are half as enthusiastic as Louise you will in for a good session. louise.orpin@theorsociety.com.

Ceri Griffiths

Cutting the Cake



Viv Brown (committee member for the life of NANAMIC) with John Barton (chair), David Martin and Sally Barton (past chairs)

Algebra for people who don't like algebra – Joan Ashley

Throughout the session we did various activities from the Standards Unit box, and I was reminded of how enjoyable these activities are.

We started the session by interpreting multiple representations of algebraic expressions using words, symbols, tables of values and area diagrams. This was a useful icebreaker and enabled everyone to participate.

We did a really interesting activity where we each had a list of equations and we had to write down what the equation meant in words. We then had to fold the original equations so that our partner could not see them, and our partner then had to write the equation from our description in words.

This showed how easy it is for maths specialists to make mistakes, let alone our learners, and led to some great discussions. As time was running out, we looked at performing number magic as a whole group activity, by analysing simple number tricks and explaining how they work using algebra. We all had an opportunity to explain our solution to the rest of the group

We regularly use the activities from the Standards Unit box in our classes at college, but this session was a very useful reminder of how exciting and fun learning can be.

Tania Pickford (Stoke-on-Trent College)

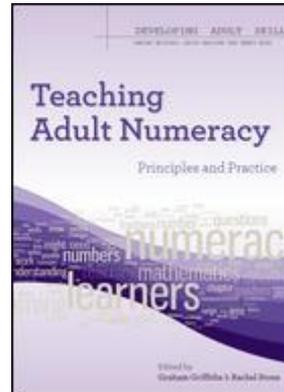
Charity Status

The committee decided that NANAMIC needed to have a 'status', rather than being a loose association. It put forward a proposal to seek to become a Charitable Incorporated Organisation and for the funds to be transferred from 1 April 2014, if we are approved by the Charity Commissioners (CC).

This was approved at the Annual General Meeting at the conference and our application is currently being considered by the CC.

Teaching Adult Numeracy Book

This summer saw the launch of a new text to support the training of adult numeracy



teachers. The book is published by Open University Press, is edited by Graham Griffiths and Rachel Stone, and contains contributions from Jackie Ashton, John Barton, Carolyn Brooks, Martyn Edwards, Janette Gibney, David

Holloway, David Kaye, Beth Kelly, Barbara Newmarch, Helen Oughton, David Prinn, Diana Spurr and Rebecca Woolley.

<http://mcgraw-hill.co.uk/html/0335246826.html>

Initial Teacher Training Bursaries

Bursaries are available for anyone with a good maths degree who wants to train to teach in F.E. It is for new teachers only, but the amounts are £12k for a 2:2 degree, £15k for a 2:1 and £20k for a 1st.

New trainees who have not made any arrangements with a specific ITT provider and want more information should contact the Education and Training Foundation helpline on 0300 303 1877.

MEI Free Short Course

Strategies for teaching fractions - a free live online professional development session for tutors and lecturers of post-16 students who are working towards re-sitting GCSE Mathematics

16:00 – 16:45 Tuesday 15 October

If you would like to take part, please register at <http://tinyurl.com/teachingfractions>

NCETM Post-16 GCSE Mathematics Enhancement Programme

From January to March 2013, the NCETM brought together a team of experienced practitioners, including some from NANAMIC, to produce four CPD packages. The packages have been designed to provide a short 'upskilling' programme for those who are planning to teach GCSE Mathematics. The project was funded by the Department for Education to support the increased numbers of those in the age group 16-19 who will be expected to study mathematics following the Wolf recommendations.

Data suggests that almost half those who at 16 achieve a grade D currently do not continue to study mathematics. One concern is that there are not enough teachers to deal with the increased participation. The packages will support those who have trained to teach adult numeracy / functional skills to deal with those topics in the higher tier. The four modules are Algebra, Geometry, Trigonometry and Statistics and were piloted with 21 colleges.

For those who may be interested in delivering this, check out the NCETM website:
<https://www.ncetm.org.uk/resources/41310>

British Congress of Mathematics Education

This event takes place every 4 years and next year's is entitled:

Building Bridges - Making Connections

It will take place at:

The East Midlands Conference Centre

University of Nottingham

Monday 14 to Thursday 17 April 2014

The website for this, BCME8, is on-line at
www.bcme8.org

Time to renew your membership of NANAMIC for 2013-4

Fees were due from 1st August and run until 31st July 2014. The cost for individual members is £20.

If you are uncertain as to your current membership status, please contact Lesley on admin@nanamic.org.uk. She will be contacting members from last year asking if they wish to renew their membership.

Please note that those of you who have CMathTeach designation must be a member of one of the participating organisations and submit your CPD record for 2012-3.

GeoDraw

There is a new APP for iPad only: [Geodraw](#). It costs 69p, with education discounts for 20 or more copies.

Mathematics matters: are international comparisons useful or just interesting?

The British Council are hosting a forum to discuss the usefulness of international comparisons at Warwick in December. It will be based on school-age children. Further details can be obtained at [SchoolsOnline](#).

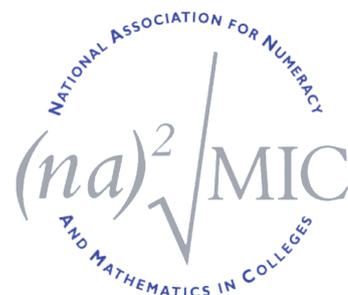
And finally . . .

We recently came across an interesting blog about how things are beginning to change in F.E. now that there is a new emphasis on Post-16 Mathematics. [Check it out](#). Hopefully it may bring a smile to your face.

Next Year's Conference

Plans are already well underway for next year's conference. Details will be available soon.

Unsure about algebra?



Date and Time: Wednesday 23rd October, 13:00-16:00

Venue: The Deaf Cultural Centre, Ladywood Road, Birmingham B16 8SZ.

Presenter: Anne Fieldhouse

Date and Time: Friday 15th November, 13:00-16:00

Venue: The Laycock Professional Development Centre, Laycock St, Greater London N1 1TH

Presenter: Joan Ashley

Aims

- To refresh participants' knowledge of algebra
- To discuss the elements of algebra which learners find challenging
- To explore together some resources and teaching approaches which address these challenges

Target Audience

- Teachers who are less confident about teaching algebra, perhaps because they are teaching GCSE Mathematics for the first time

Content

This half day session will focus on how teachers can help learners to understand and enjoy algebra, as well as acquiring the knowledge and skills they need to pass examinations.

**Cost: Members: £70
non-members £90 (inclusive of £20 membership for
the current academic year which can be billed separately)**

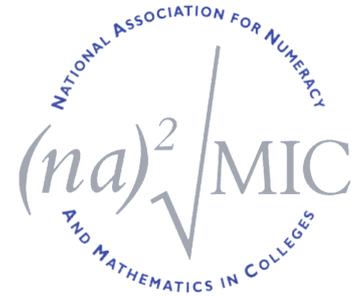
Further details from Lesley Way on 07757 816402 or admin@nanamic.org.uk

Refresh your GCSE Maths (Statistics)

Presenter:tba

Date and Time:tba

Venue:tba



Aims

- To refresh participants' knowledge of Statistics for GCSE Mathematics
- To discuss the elements of statistics and probability which learners find challenging
- To explore together some resources and teaching approaches which address these challenges

Target Audience

- Teachers who want to refresh their knowledge and skills for GCSE Maths (Statistics) or may be teaching GCSE Maths for the first time

Content

- This half day session will focus on the concepts and skills required for GCSE Maths – Statistics and Probability. Come along and experience a range of activities together to help motivate and engage your learners.

Cost: Members: £70

non-members £90 (inclusive of £20 membership for the current academic year which can be billed separately)

Further details from Lesley Way on 07757 816402 or admin@nanamic.org.uk