

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

*An association for all in the Lifelong
Learning Sector*

Autumn 2009

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NETWORK MEETINGS

In July we ran a network meeting for teachers involved in the *Level 5 Diploma in Teaching Mathematics (Numeracy) in the lifelong learning sector*. This was an opportunity to discuss issues and concerns about course delivery and assessment, to share resources and teaching ideas. The participants attending were enthusiastic about this and requested regular, possibly termly, meetings. The next will be held at Castle College on Tuesday 20th October. The agenda is set by the participants who also contribute to the presentations.

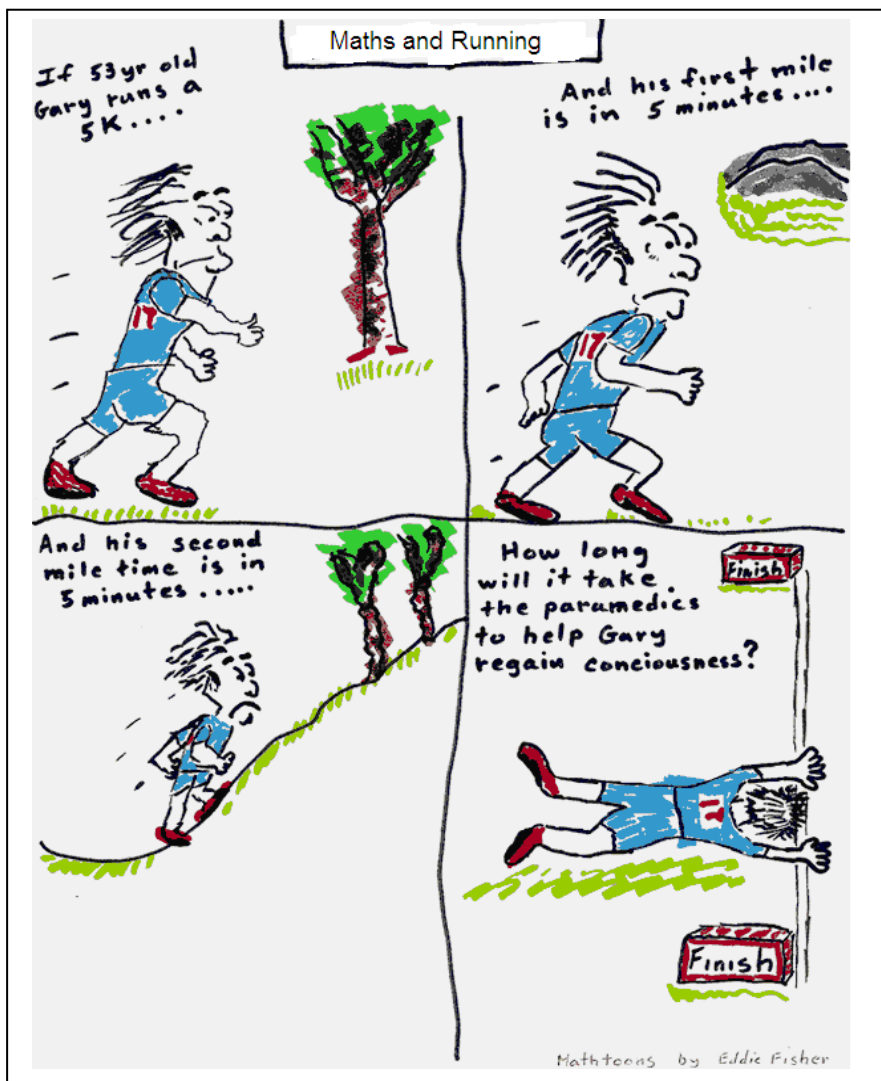
We would like to offer teachers in other parts of the country the chance to have more local networks so if anyone is prepared to host one of these networks, please get in touch with Lesley Way at committee@nanamic.org.uk.

Welcome to the Autumn edition of our newsletter.
First a thought from Alan Cossains our Chair

Maths with a silent F (sometimes).

At a NANAMIC training event I jokingly said that one of our aims is to put fun into maths. One of the delegates looked puzzled, "There's always been fun in maths", she said, and on reflection she was right. We become mathematicians or choose to teach maths and numeracy because we are enthusiastic about the subject and part of this enthusiasm comes from the fact that we can have fun with mathematical concepts.

This was certainly the theme that Joan O'Hagan illustrated during her keynote presentation at our summer conference. Joan moved effortlessly from American game shows that illustrate the rules of probability (and the use of canned laughter) to throwing balls of wool to illustrate patterns in the times tables.



Joan reminded me that there is always fun in maths but sometimes we forget this, so my personal theme for the coming year is to bring out the F in maths and not allow it to be silent.

How about using cartoons in maths lessons. What maths could we get from this one?

Here are some ideas .

After running 2 miles how far does Gary still have to go?

Is 5 minutes a mile fast for a 53 year old? To help you to answer this question you might convert 5 minutes a mile into miles per hour.

You could also work out how long it would take him to run a marathon if kept up this pace (the world record is 2 hours 4 minutes).

NANAMIC would like to thank all contributors to this edition of the newsletter. If you would like to contribute to the next newsletter, please contact the Administrator by emailing committee@nanamic.org.uk

CHARTERED MATHEMATICS TEACHER

Are you a mathematics teacher who aims to motivate, enrich and inspire your students? Would you like recognition of your commitment to professional excellence, ongoing CPD and mathematical competence?

The CMathTeach designation is NEW and is for YOU.

It is incorporated within the Royal Charter of the Institute of Mathematics and its Applications and is benchmarked at the same level as a Chartered Mathematician, Chartered Accountant, Chartered Engineer, Chartered Science Teacher etc.

The Authority is composed of representatives from

NANAMIC	The National Association for Numeracy and Mathematics In Colleges
ATM	The Association of Teachers of Mathematics
IMA	The Institute of Mathematics and its Applications
MA	The Mathematical Association

You can apply for admission to the register of Chartered Mathematics Teachers through Nanamic—you will need to be an individual member and you will need to show that you meet the requirements of the designation in the following four areas:

Pedagogy, Mathematics, Experience and Continuing Professional Development

Full details of the requirements can be found on our website: basic details are:

Pedagogy

Applicants must have a Masters-level qualification in pedagogy/education, or demonstrate that they are actively engaging with developing their pedagogy—eg by involvement in NCETM Action Research projects.

Mathematics

Applicants must have an honours degree in which there is a minimum of 50% of the course in mathematics, or demonstrate an equivalence eg:

Their personal appreciation of mathematics as a subject with deep intrinsic interest as well as important applications in many fields, show an appropriate understanding of links between topics within mathematics ; demonstrate knowledge of the relevance and application of a wide range of aspects of mathematics to other subjects in the curriculum and an appreciation of the nature of the difficulties that students at all levels experience when learning mathematics

Experience

Applicants must have at least four years experience of teaching mathematics following Qualified Teacher Status, Qualified Teacher Learning and Skills status or equivalent, of which at least two are at an appropriate level of responsibility. The expectation is that the standard is equivalent to that required to be awarded Professional Standards Payments (PSP).

Continuing Professional Development (CPD)

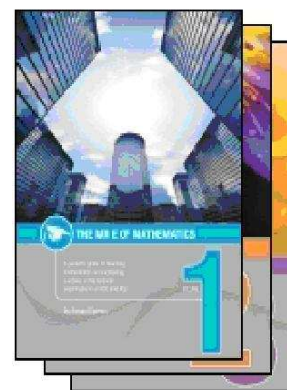
Applicants must make a commitment to maintaining their continuing CPD throughout their career. Applicants would be expected to demonstrate work beyond their own classrooms, and to conduct themselves at all times in a professional manner as well as being a member of one of the above organisations.

Want to know more? Visit the website, <http://ima.org.uk/cmathteach/requirements.html>, or come to the NCETM event on December 1st when the first CMath Teacher designations will be awarded.

Book Review

The Mr E of Mathematics covers basic mathematics from whole number operations through to Pythagoras' Theorem (or even to the theory of special relativity for the brave).

Initial impression is that Mr E contains a lot of text, but to dispel the mystery of mathematics this book's complete text and illustrations do explain and reinforce in a very detailed way. The author certainly believes his own commandment (p111) "Understanding is better than just learning arbitrary rules".



The book is primarily written for adults as a resource for them to use with learners but could also be used by an intelligent adult to improve their own understanding. Multiple representations are given and common difficulties dealt with, including the way in which English is used. Many of the resources needed to complete the suggested activities are provided.

There is a clear layout with bold print for emphasis and to indicate subtopics within the index at the back, the only drawback is the level of English used which would cause difficulties to anyone without good literacy skills.

CALLING ENTHUSIASTIC Members of NANAMIC in the East Midlands

December 1st East Midlands Conference Centre

NCETM are holding a one day conference, see <http://www.ncetm.org.uk/cpd/15989> for details. Registration is free but needs to be done by November 6th.

As well as workshops on: What you do in the classroom;
What goes on at home;
Progression and transition through mathematics – from primary to higher education;
the day will include the launch of the CMath teach designation and the Subject Associations are invited to promote membership of an association.

Your committee members could do this BUT the message will be more powerful coming from an "ordinary" member. We will be there to set up the display and provide literature—who is willing to help us?. Please email Lesley Way at committee@nanamic.org.uk if you could do a session on the stand.

On the day, if you are there, do come and chat to us and say hello.



‘Mathematical Progressions’

April 6th - 9th University Place University of Manchester



In 2010, all the leading UK mathematical organisations unite in a single conference dedicated to mathematics and mathematics education. It will offer delegates a rich and rewarding experience and give you the opportunity to mix with colleagues in your own specialist area and broaden your horizons by meeting new friends with other specialist interests

Association of Mathematics Education Teachers
 Association of Teachers of Mathematics
 British Congress of Mathematics Education
 British Society for Research in Learning Mathematics
 British Society for the History of Mathematics
 Edinburgh Mathematical Society
 Heads of Departments of Mathematical Sciences
 Institute of Mathematics and Its Applications
 Joint Mathematical Council
 London Mathematical Society
 Mathematical Association
 Mathematics, Statistics and Operational Research Network
 National Association of Numeracy & Mathematics in Colleges
 National Association for Mathematics Advisers
 National Centre for Excellence in Teaching Mathematics
 The Operational Research Society
 The Royal Statistical Society

For those of you fortunate to be able to go to a conference at Easter as well as coming to our day conference, then next year BCME is the place to be. For details visit the website <http://www.bcme7.org>. There will be a post-16 day on April 9th.

This will include a session on the GCSE Use of Mathematics—so if you are teaching this and are willing to share your experiences so far then please get in touch.

The shared nature of this conference reminds us that at the AGM we discussed the “Penzer paper” (see [http://www.nanamic.org.uk/Consultation letter.htm](http://www.nanamic.org.uk/Consultation%20letter.htm)) on possible ways forward for the Mathematics member associations. The voting at the AGM gave a majority vote to creating one single association, albeit with a clear post-16 strand. There were however some votes against this option whilst everyone was in favour of moving to a federation. We will share this with the other organisations and wait to hear their views. In the meantime we continue to work together with them.

Do you have a view on this—or any other subject affecting post-16 teachers and learners?

Your committee are here to serve you. If you have any concerns/ ideas/ items you would like Nanamic to consider then please use the website to contact us. We do communicate between meetings by email, but if there is something you would like the whole committee to discuss please note the dates of committee meetings:

Thursday 10th December 2009

Saturday 27th February 2010

Wednesday 28th April 2010

Thursday 8th July 2010

We look forward to hearing from you.

This year NANAMIC has provided a variety of training events, in many ways breaking new ground.

Functional Maths made headline news on occasions, so we ran three training days on this topic. We were lucky to have a representative from QCA to bring us up-to-date with recent developments, and Garry Haynes from OCR, who explained the thinking behind different types of assessment. Garry's input was highly valued by the delegates with his clear and well-presented explanations.

The delegates found these events extremely useful and we want to continue to offer teachers in the post-16 sector the opportunity to receive training on Functional Maths as well as the chance to exchange ideas.

In February, on the day the snow came, we ran our first training day in Scotland. The delegates valiantly struggled through the worsening weather and transport difficulties, to attend Julie Kay's excellent training on "Dyslexia and Maths". Judging from the evaluations, delegates certainly found it worthwhile, with Julie providing a mixture of background, theory, research and practical tips. The good news is that we all managed to reach home safely, eventually. We hope to be able to repeat this very popular event again next year, and to run more training days in Scotland.

In June we held our annual conference at The Stables Conference Centre which is part of Doncaster College. The venue was wonderful, set in the countryside, and the day was enhanced by the warm summer weather and the excellent food.



**The next Summer Conference will be held on
Thursday 1st July 2010 at
The Stables, High Melton, Doncaster**

In this newsletter you will find excerpts from the reports written by delegates at some of the workshops. The full reports can be viewed on the NANAMIC website www.nanamic.org.uk.



Nanamic's Chair. Alan Cossains welcomed us to the conference and introduced Joan O'Hagan who gave the Keynote Address:

Doing mathematics – maelstrom or thermal?

Joan's excellent keynote address explored how intuition, emotion, judgement and logic interact when we try to do mathematics. The enjoyable and stimulating experiences of the session enabled us to engage with our inner mathematician while challenging our approaches.



Joan challenged the traditional approach of first strengthening procedural skills before applying these in a sophisticated way to consider a culture change where we get learners to apply sophisticated thinking utilising the simpler procedural skills as they are developed.

When it comes to issues of probability some solutions can be counterintuitive. We were introduced to the Monty Hall problem. When do we stay with a previous decision and when do we change our minds? How much can intuition help us?

When a child says "To multiply a number by 10, just add a zero." Is this right? wrong? sometimes a good idea, sometimes not? a good idea that's been stretched beyond its usefulness? a mathematical misconception? a good idea that needs tweaking?

A few of us were called to the front into a circle amidst a pile of coloured balls of wool to investigate number patterns and multiplication tables. Numbered 0 to 9 we passed a ball of wool onwards from 0 to 3 to 6 to 9 to 2... leaving a wool trail behind. Added to this a new coloured trail as we investigated the 7 times table 0 to 7 to 4 to 1 to 8...

It was sadly time to draw to a close, for now.

David Martin

Joan also led a workshop: “ The Goldilock’s Effect”

Goldilocks the little girl (in the story of “The three bears”) who had to make choices.: Which bowl of porridge to eat? Which chair to sit in? Which bed to sleep on?

How much information do we need to make good decisions? How many times are we told, “The more information that you have the better the choice you can make? “

Is this true? Joan herself had often wondered this, faced with an empty car park it seems so difficult to choose where to park, near the ticket machine? near the shops or in the shade? Maybe security is an issue?



Gerd Gigerenzer has written three books on the topic. One, large complicated book , called “Simple Heuristics that make it simple” and two simpler looking books; one is called “Gut Feelings.” He suggests that the less information you have on something the more likely you are to choose correctly. Initially it sounds a silly idea but we then explored the suggestion. We were asked, “Which place had the largest population, Reykjavik or Bolungavik. Most people quickly said Reykjavik; the reason for this choice was we had heard of it. Some of the people said Bolungavik as they knew that Reykjavik was small. The people with the least knowledge were correct.

Having a mathematical mind can cause a cloudiness over decision making. For example when faced with medical choices being given the percentage information re success rates etc can almost make a logical choice impossible.

So is the suggestion that we send students into exams with no information? No that would be nonsense. In my opinion it is just saying the small choices that we are faced with on a daily basis are probably best made based on a small amount of knowledge. This was a lively, interesting workshop that made you see the world in a slightly different perspective. It was a pleasant change to hear something new. One day I may even read one of Gert Gigerenzers’s books.

By Penny Wright

Jane Annets Innovative A-level

What a relief to attend a workshop which was introduced as ‘Lazy A-level’, until we all realised that this was directed towards the teacher of the group and not us! How Jane managed to pack so much into fifty minutes, I do not know, but it was presented with enthusiasm and expertise (and a little humour). We were given lots of tasks to complete, both in pairs and alone, which put the onus on the learner, and moved around the room working on activities started by others. Lots of good ideas for peer assisted learning. Throughout the session, Jane picked up our comments and brought our ideas together, stressing the need for precise vocabulary and definitions.

I found the workshop extremely useful, and am looking forward to using some of the ideas. I believe that Jane summed up beautifully by explaining that computers and talk-teaching have their place in the classroom, but we should never forget that sometimes “quick and easy is the most powerful”.

Kathryn Laycock, Huddersfield New College

Karen Fuller – Using personal finance as a context for teaching mathematics and numeracy

Karen is a consultant working for the Personal Finance Education Group which is more commonly known as pfeq a financial literacy charity, one of whose key funders is the Financial Services Authority (FSA). Their mission is that “all young people leaving school have the confidence, skills and knowledge in financial matters to take part fully in society.”

As usual I had to bite my tongue and *not* ask why the greater numbers of adults who have already left education without these skills are overlooked by pfeq, similar organisations and some government departments. After all, Karen was attending our NANAMIC event so now was not the time but.....



Anyway, the workshop which followed allowed us to explore the concept and value of financial capability, look at some of the available resources and find out about the support available from pfeq whose website www.pfeq.org was one of the very useful ones brought to our attention. Approximately 80% of resources referred to on the website are free!

We are all used to seeing educational facts and figures everywhere we look but Karen did make even the knowledgeable and interested folk in our group really think and use our maths usefully with some of her statistics. Did you know that **every day**;

UK consumers will have borrowed another	£154million
UK consumers will pay interest amounting to.....	£252m
CAB will deal with debt problems from	4760 people
The amount spent on plastic cards will be	£1.56billion
Of all the food we buy today we'll throw away	33%

The source of this data was another very useful website, particularly for relevant and current statistics– www.creditaction.org.uk

The FSA baseline survey found that, as many of us now know, but perhaps tend to forget or ignore;

- large numbers of people, from all sections of society, are failing to save enough for retirement or put money aside for emergencies
- many people take financial risks without realising, because they lack the ability to choose financial products that meet their needs
- the under-40s are less financially capable than their elders

Test yourself: if you need a £1,000 loan could you quickly calculate which of the deals below involves the least interest?

- A. 20% APR, paid back monthly over 3 years
- B. 20% APR, paid back monthly over 1 year
- C. 15% APR, paid back monthly over 3 years
- D. 15% APR, paid back monthly over 1 year

See the answers on the facing page

We began to appreciate how personal finance could contribute very positively to the development of **Functional skills**. After all it offers

Real life contexts

Abstracting data and interpreting

Possible redundancy of information

Justifying given solutions, explain why

'Mastery' – being able to conquer the bulk of the subject matter

Problem solving emphasis and consequent high literacy demands

Potential for cross-curriculum work

Plus

The end to the question "*when am I ever going to need this?*"!

So, just a few more useful bits of info I picked up. Firstly, another useful website, www.moneysavingexpert.com, where there is section by The Demotivator who 'stops you spending what you can't afford' that uses simple maths to really shock people about the costs of their regular spending on inessentials. Many learners will not believe what they see and could be encouraged to check the figures etc. It certainly made me think about the cups of coffee and occasional bit of cake I give into far too often when I'm out and about!!!

Secondly, the wealth of great starters or 'Mini Maths Activities' available from pfeq

Finally, a nice list of typical Sometimes, Always, Never True questions but in a functional, financial context e.g.

0% interest means you don't have to pay any money back

A "buy one get one free" offer for soap powder is cheaper than the same product sold at 50% off

If your house appreciates 50% over 2 years, then house prices drop 20%, you are still up 30%.

Five pounds and nine pence is the same as 5.9

So, another really good session, made me think, some good resources and ideas on how to use them!! More please!

Answers – A. £308 B. £102 C. £232 D. £78

Sue Pope Mathematics Update for NANAMIC

Sue Pope works for the QCA (Qualifications and Curriculum Authority). They have an interest in all learners and making sure that there is a suitable assessment for everyone. She shared with us QCA's thoughts:

WHAT are we trying to achieve?

HOW are we organising learners?

HOW are we achieving our aims?

She shared thoughts so far on Functional skills: - students are disliking functional skills. Some teachers are thinking it is an easy exam and just entering students without preparation, these students are failing. The exam needs to be prepared for and needs thinking skills.

(Continued on page 12)

(Continued from page 11)

She also told us of some decisions which have been taken:

There will be no functional skills for level 3.

Functional skills will replace Key Skills.

Functional skills MAY replace Skills for Life; a decision has not been made yet.

At the moment a double maths GCSE is being looked into for readiness in 2015 a pilot is wanted for post 16's. She also shared that there are still many issues arising from A' levels as numbers return to pre-year 2000 numbers. The Smith enquiry highlighted the problems. There are still issues with retention in maths A-level, that need to be addressed.

Entry level 1 and 2 maths will remain tutor lead while Entry 3 may be a written timed exam.

This was an informative workshop, letting us know of all the new updates and directions maths is going in. It was done in a lecture style which is probably the best way of receiving lots of information.

By Penny Wright

Changes in school mathematics—how will it affect your learners?

Are you aware of the changes currently happening in school maths? The chart opposite highlights the timeline of the changes.

Skilled to Go - Sam Brew

This was an opportunity to hear of the new package devised by The Office of Fair Trading (OFT) and Lifelong Learning UK (LLU.K) call Skilled to Go. The resources were devised to improve the consumer education of students of all ages and give an opportunity to improve their mathematical, English, and ICT skills in contextualised situations. The resources are available at www.oft.gov.uk/skilledtogo, including variations for the laws in Scotland and Northern Ireland.







After a general introduction, we were able as a group to look at some of the resources and investigate their potential. The resources can be adapted according to the nature of the students, their background and interests. There are also staff resource packs and suggested outlines and schemes of study on the website.

On your first visit you will be asked to register to access the resources which come as pdfs: they are well worth investigating.

Andrew Davies, Castle College

Skilled to go for adult education

This version of Skilled to go has been developed for use by tutors working in adult further education with learners on literacy, numeracy or ESOL programmes. There are versions for England and Wales, Scotland and Northern Ireland. Developed by the Office of Fair Trading and LLU+ at London South Bank University, Skilled to go helps to develop transferable consumer skills, knowledge and confidence. It uses everyday consumer situations, such as choosing a mobile phone, as contexts for developing literacy and numeracy alongside consumer skills.

Buying and selling These materials help to develop skills to be an effective consumer in shops, online and in informal situations. Learners can analyse features, compare goods and services, role-play sales scenarios and learn what to do if things go wrong. Includes video activities.	
Technology Mobile phones, TVs, broadband and the digital switchover - activities develop research skills, and encourage individuals to analyse their needs and to compare product features and running costs. Learners can also practise dealing with salespeople. Includes listening activities.	
Utilities This module helps learners to understand energy bills, compare suppliers' costs and to analyse whether switching supplier is a good option for them. Plus, there's content to develop skills to complain effectively and know where to get help if things go wrong. Listening activities are included.	
Buying and running a car Activities will support learners to research a reputable contractor and communicate effectively in sales and repair situations. Plus students can learn their rights and what to do if they're unhappy after a car service or repair. These materials are currently being developed and will be published in summer 2010.	
Scams Develop the skills and knowledge to spot and avoid scams and the confidence to say no to scammers. These materials are currently being developed and will be published in summer 2010.	
Comments Please tell us what you think about Skilled to go, your experience of using it, what learners think or give suggestions for future modules. Email us at toolkit.update@oft.gsi.gov.uk	

	2008-9	2009-10	2010-11	2011-12	2012-13
Y7	KS3 PoS				
Y8		KS3 PoS			
Y9			KS3 PoS		
Y10			TA based on new PoS		
			KS4 PoS		
	2-tier GCSE no cswk				
	GCSE with embedded functional skills pilot	GCSE with embedded functional skills pilot	GCSE 2010		
	Process-based GCSE pilot	Process-based GCSE pilot	New pair of GCSEs pilot		
	Functional Skills pilot	Functional Skills pilot	Functional Skills		
	Study Plus				
Y11				KS4 PoS	
	2-tier GCSE no cswk				
	GCSE with embedded functional skills pilot	GCSE with embedded functional skills pilot	GCSE with embedded functional skills pilot	GCSE 2010	
	Process-based GCSE pilot	Process-based GCSE pilot	Process-based GCSE pilot	New pair of GCSEs pilot	
	Functional Skills pilot	Functional Skills pilot	Functional Skills		
	Study Plus				
14-19	5 Diplomas	10 Diplomas	14 Diplomas	17 Diplomas	
	FSMQs pilot GCSE Use of Mathematics (post-16 only)	FSMQs pilot GCSE Use of Mathematics (post-16 only)	FSMQs pilot GCSE Use of Mathematics (post-16 only)	FSMQs pilot GCSE Use of Mathematics (post-16 only)	

The first schools and colleges started teaching 5 Diploma courses in 2008.

- Construction and the Built Environment
- Creative and Media
- Engineering
- Information Technology
- Society, Health and Development

5 more subjects have been added fthis September 2009:

- Environmental and Land-based Studies
- Business, Administration and Finance
- Manufacturing and Product Design
- Hospitality
- Hair and Beauty Studies

Another 4 will start from September 2010:

- Travel and Tourism
- Public Services
- Sport and Active Leisure
- Retail Business

And 3 more will start from September 2011:

- Humanities
- Languages
- Science

These are the changes coming in to schools — Last year we had students who had taken the two tier exam, but with coursework.

This year, and for the next two years, we will receive students who have taken the two tier course

without coursework—which has meant some changes to the exam to include problem solving. All of these students will have been taught under the old KS3 and KS4 program of study. In 2012 we will receive students who have followed the new KS4 PoS (but the old KS3 PoS). From 2013 onwards we will begin to see the full effects of the new KS3 program of study followed by the new KS4 PoS with the new GCSE.

The new Programs of Study encourages a much more problem based approach and the exams will include both problem solving and functional elements. The Functional skills pilot has been running for a while but this year any school can opt to enter their students (and if they are doing diplomas they must take functional maths) so from next year we will also get some students who have taken functional mathematics.

We don't yet know how the new PoS will influence the students we receive, but there will be changes and we need to be ready to adapt what we do to take advantage of their new strengths in problem solving etc.

Lynne M^cClure - Games are more than fillers

This was a very engaging, informative and fun workshop that also made us all think!! What more could you ask of a workshop? There was so much of interest in the session and it was only a tantalising taster!! We could have stayed there for another hour and still not come close to exhausting this topic, let alone the others Lynne could have chosen. Fingers crossed she can be persuaded to come and entertain, inform and inspire us again!!

Lynne comes from a primary & ALBSU background and, whilst it showed, her points were equally applicable to adult learners and all the games and activities she showed us were usable as they were or with small adjustments.



So, why should we use games and longer 'simmering' activities?

Well, so many people describe school maths as TIRED

Tedious **I**solationist **R**aced through **E**litist **D**epersonalised

We looked at some of the theory underpinning what Lynne does, including Bloom's 3 stages, before we moved on to Lynne's belief that a way to achieve more active, successful involvement with learning is by offering, at each level

A game which supports practice of the skill/knowledge whilst offering opportunities for strategic thinking

A longer investigation/simmering activity which often offers choice

We then got very interactive and tried out some of the games e.g.

Game 1

Draw a 0-20 number line. Use a pair of numbers adding or subtracting to make another number in the range. As a number is used it is crossed out while the answer to the question is circled and used as the starting point of the next calculation.



We worked in pairs to play the game and see what happened and to work out our own rules. This is a key point as it gives 'ownership' to the participants. Also they can choose rules to suit their level and so has inbuilt differentiation. We then played **Four go again**

For both games we then considered the following questions: How is it 'open ended'?

What is the mathematical knowledge that is needed to play this game?

Who would this game be for?

What is the 'value-added' of playing the game?

There were other games and activities but the key point they brought out was that

Games are more than fillers because they:

Can be used to consolidate/assess are open ended to allow simmering

Combine curriculum content with mathematical thinking

And, if suitable for the whole class, lead to a whole class shared memory

.The simmering activities cannot be forgotten either.

Often allow for interest ie choice

Allows for down time

No excuse to be bored...

Not completed at the end of the lesson!

Jennifer Piggott Functional mathematics - learning to solve problems

If you are not aware of Nrich and you deliver maths or numeracy at any level then you really should be. Nrich, <http://nrich.maths.org>, is a huge web based bank of resources for teaching all aspects of maths.

Jenny Piggitt [nrich Project Director] very proudly ran through a selection of the 6.5 thousand resources available through the site and landed on a few gems.

How about using a simple 1-100 square, printed on both sides of the paper. Now ask your self which number is printed on the corresponding side of 27? It's 24 of course! But the important thing is to discuss how you knew that. What did you do in your head to get the answer – there is more than one way of course.

How about looking at a pattern: just looking and saying what you see. Or how about challenging the computer to a game of [Square It](#) or getting your head around what happens to the area in [tilted squares](#).

These are only a few of the resources –some printable some interactive. And of course with 6500+ resources you need a sorting system to access them so haw about a system that links to key stages or can be searched by topics. This site offers starting points for you and your student's imagination and questioning to run riot and to take you wherever you choose to go.

Functional Skills is not all about using maths to buy the right amount of wallpaper to paper a room it is about understanding and mastering what maths can do and this site offers so many stating points for that kind of investigation and discussion. The answer, as Jenny pointed out, is not always the most important thing; it is the journey you chose to take to get there that matters.

If you are not using Nrich when planning your sessions you students really are missing out, and for me Jenny's session injected the fun, adventure, and exploration into maths that makes it such a vibrant and exciting subject.

Derek Smitheman, Portland College

More Nrich sessions are featured on the website



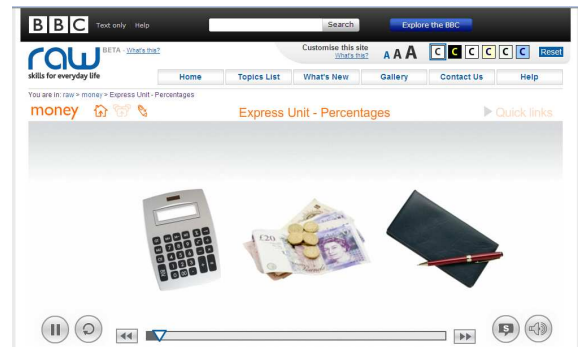
Michael Rumbelow

BBC RAW NUMBERS

An interesting mix of a workshop! It didn't start off too well as Michael was very nervous but, and it's a big but, he is passionate about using appropriate technology to 'inspire and support adults who have low-level numeracy skills and/or a 'phobia' of maths to become more confident and fluent with numbers' when and in ways that suit them.

As delegates were steadily won over by his genuine passion, Michael relaxed and demonstrated the considerable potential of this latest of the BBC's education projects, entitled BBC Raw Numbers. It has not yet gone live but should do so this autumn (2009). Michael issued an invitation to delegates to get involved!

The key point to make here is that the content focuses on skills for everyday life and is aimed at adult learners - not us, not teachers/trainers. It has been developed as an informal online facility. If you haven't seen the online resources visit eg http://www.bbc.co.uk/raw/money/express_unit_percentages



Michael refreshed our memories of the key facts that explain why the BBC thought there was a need to extend their work in the Skills for Life arena. They have recently undertaken audience research and additional research, carried out by NRDC - providing an overview of existing research on adult numeracy. The full report will be published on the NRDC website in the near future. It's emphasis "was on poor numeracy: its antecedents and effects, teaching and learning to overcome it, and the potential use of ICT and mobile technologies in that pursuit." Interestingly a higher preference was identified for mobile phones than for computers.

The BBC team used the results to develop content for mobile phones, content that will help deal with some of the identified key numeracy issues. These have been tested with and by core market adults e.g. working with bus workers at Holloway Bus Depot and getting them to devise their own games so they have 'ownership', thus echoing comments from both Joan O'Hagan and Lynne McClure in their workshops.

Michael then provided each pair of delegates with a mobile phone on which to test/play a game developed by Holloway Bus depot staff. A game in which the aim is to double or halve or add 2 more to an initial number of squares until they end up with the required number in a single line so that it can pass through a doorway the exact size. If the player succeeds in under a set no. of moves then they get to see a favourite landmark on their chosen route!! So very place specific!! But also very successful in engaging the target group of adults!!

It was also very successful with most of the delegates, some of them becoming very animated about the potential! A few took a little more persuading but most quickly saw that, for the target market, BBC Raw could add a very powerful additional tool to the armoury needed to help some adults engage with and make lasting progress in numeracy.

Anne Fieldhouse



Maths at Work

Competition time—what mathematics can you see in these pictures?

NB the prize winning answers not only found possible maths questions but they were questions which someone might need the answer to!

See the website and send us questions of your own.

NANAMIC can offer the following training to groups anywhere in the country. This can be for individual organisations or groups of organisations.

Costs will depend on numbers attending. For further details and to discuss options please contact the Administrator

Piloting the NCETM
CPD Standard

National Centre
for Excellence in the
Teaching of Mathematics

www.ncetm.org.uk



Improving Learning in Mathematics approaches that encourage active learning including group work, discussion and open questions

Programme

09:45 Welcome & Registration

10:00 Discussing beliefs about learning & teaching—the aims and background to the project approaches and resources

10:45 Activities and approaches from the Improving Learning in Mathematics resource

12:30 Lunch

13:15 Further activities from the resource

15:15 Plenary and Evaluations

15:30 Close

So take time out with colleagues to discover ILT a substantial free resource encompassing 6 CPD sessions, 51 sessions for learners including activities, IT links and approaches and guidance.

For further information please contact:

Lesley Way
NANAMIC Administrator and Conference Organiser
Email: committee@nanamic.org.uk
Website: www.nanamic.org.uk

CPD

NANAMIC is now an approved professional development (CPD) provider meaning that the training provided meets the standards set by the National Centre for Excellence in the Teaching of Mathematics (NCETM).

So these trainings are suitable for inclusion with delegates' reflections in a Continuing Professional Development (CPD) portfolio.

Who is this event for?

All teachers of maths whether newly qualified or experienced

Staff who assist in teaching maths without a maths background e.g. teaching assistants

Individuals who would like to add to their repertoire of teaching techniques and resources

What will it cover?

Exploring beliefs about teaching and learning

The research underpinning 'Improving Learning in Mathematics' (ILIM)

Approaches, activities and learner responses to ILIM

Responding to learners differing abilities and learning styles

We can come and deliver this training to you but there is an opportunity to experience these activities with like-minded colleagues in a supportive networking atmosphere on

Friday 23rd Oct

**At University of Wales, Caerleon Campus,
Newport**

Led by Viv Brown, NANAMIC

See the website or contact Lesley for details