

The National Centre for Excellence in the Teaching of Mathematics: Origins, Successes and Challenges

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 Berlin Sep 2010



A snapshot of the English mathematics agenda aiming....

1. to raise *standards* in mathematics:
 - internal performance tables with tests at 7, 11, (14) & 16
 - TIMSS, PISA, and adult numeracy
2. to *increase participation* in mathematics post-16

to achieve **BOTH** needs

• **recall we have a statutory National Curriculum**

- appreciation of the point of mathematics
 - for itself,
 - as a tool in other subjects
 - for its 'exchange value' for individuals and for the country

Reports drive the agenda: some examples

SET for success: Sir Gareth Roberts's Review of SET (April 2002)

Making Mathematics Count: Post-14 Mathematics Inquiry (February 2004)

The Science and Innovation Investment Framework 2004 -2014 (2004).

14-19 Education and Skills White Paper (2005)

STEM Programme Report (2006)

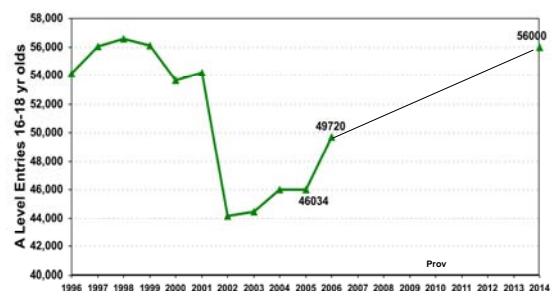
Sainsbury Review of Science (2007)

Review of teaching in Early Years Settings & primary Education (June, 2008)

Science and Mathematics Secondary Education for the 21st Century, (Feb 2010)

target for 2014 set in 2005/6

A level entries (specialist mathematics examination, 18years)



Influential report on Mathematics

Making Mathematics Count, 2004

Government response

National Centre for Excellence in the Teaching of Mathematics

set up in 2006 in England
 I became Director in 2007

see

www.ncetm.org.uk

Investment in the Centre



£28.6 million (2006 – 2011) in the creation and running of the National Centre for Excellence in the Teaching of Mathematics (NCETM)

National Centre
for Excellence in the
Teaching of Mathematics

The Vision

to develop a sustainable national infrastructure to support the subject-specific professional development of all teachers of mathematics




to meet the professional aspirations of teachers

to realise the potential of learners

National Centre
for Excellence in the
Teaching of Mathematics

Objectives 2009-2011

To stimulate demand for mathematics-specific CPD, contributing to the strengthening of the mathematical knowledge of teachers.

To lead and improve the coordination, accessibility and availability of mathematics-specific CPD.

To enable all teachers of mathematics to identify and access high quality CPD that will best meet their needs and aspirations

Over 6400 schools & colleges have made significant contact with the NCETM in this academic year so far

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My Personal Vision as Director

committed to partnerships

- within mathematics community
- within STEM (Science, Technology, Engineering, Mathematics)
- head teachers, college leaders, local authorities, parents
- academics in Universities: mathematics educators, mathematicians, and

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NCETM activities... ...blended for success

- face-to-face events & network meetings
- personal interactions with the NCETM portal www.ncetm.org.uk



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Face-to-face meetings: National Conferences & regional events Influence & Impact events




It was great to spend time with others who believe maths is not just for exams

[best] particularly for me, speaking and listening to primary school teachers and their difficulties in teaching some maths....

Over 5000 teachers attended NCETM events already in 2010

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A quick glimpse of the portal

Professional Development Directory

www.ncetm.org.uk has had over 6.46 million page views since May 2007

Calendar in South West and Yorkshire and the Humber

Pick one or more regions from the map to display information relevant to your area:

- International
- National
- East of England
- London
- North East
- North West
- South East
- South West
- West Midlands
- Yorkshire and the Humber

Are these the right regions? Choose your region(s) in your user profile.

Calendar listing for 01/07/2010 to 31/07/2010, for region(s) South West, Yorkshire and the Humber

Show: Day Week Year < Previous Month Next Month >

1 to 10 of 19

1 2 next last

NANAMIC Annual Conference, Thursday 1st July 2010
 NANAMIC Annual Conference. Following the success of last year's conference we are returning to The Stables, High Melton, Doncaster on Thursday 1st July 2010 for our conference. Those of you who came last year will remember the great venue, delicious food as well as the stimulating presentations. Unfortunately...

Runs: 01 July 2010
 Venue: The Stables, High Melton, Doncaster
 Event National Association for Numeracy and Mathematics in Colleges (Organiser: NANAMIC)

Mo Tu We Th Fr Sa Su
 28 29 30 1 2 3 4
 5 6 7 8 9 10 11
 12 13 14 15 16 17
 18 19 20 21 22 23 24
 25 26 27 28 29 30 31

Filter Listings
 Show Expired Entries

Search

Standards
 NCETM CPO Standard (6)

Role
 Advanced Skills Teacher (7)
 Consultant / Adviser (4)
 Head of Mathematics / (19)
 Mathematics Coordinators
 Primary Skills Teacher (1)
 Learning Support Staff / (6)
 Higher Level Teaching Assistant (8)
 Lecturer (8)
 NCETM Partner / Stakeholder (2)
 Newly Qualified Teacher (14)
 Return To Teach (1)

NCETM communities

Most popular thread

Maths Café

- How do you teach division? 5072 views, 81 posts

Another popular community

- assessment for learning

450 communities with almost 4000 different threads and 17,000 posts, viewed over half a million times

Excellence in Mathematics Leadership microsite EiML

Site continues to develop through communities on portal

in depth modules written by subject associations

- for secondary subject leaders launched May 2010
- for primary subject leaders at launched June 2010

32321 content hits since launch for EiML

Topical resources.... ..volcanic ash

Secondary Magazine Issue 60

It's in the News! Long journey home

The fortnightly *It's in the News!* resources explore topical context. The resource is not intended to be used as a lesson but as a resource which you can personalise to fit your classroom.

Primary Magazine Issue 24

It's in the News!

During March 2010 the Icelandic volcano Eyjafjallajökull entered an explosive phase and re-erected a cloud which rose up to 10 km into the atmosphere. This led to engine failure they would close the air traffic routes across the globe. This resource invites you to explore the impact of the volcanic ash on the world. It looks at the volcanic ash that closed the skies to almost everything apart from the world. It looks at the volcanic ash that closed the skies to almost everything apart from the world. It looks at the volcanic ash that closed the skies to almost everything apart from the world. It looks at the volcanic ash that closed the skies to almost everything apart from the world.

Guatemala, El Salvador, North Pacific Ocean

imes

The Self Evaluation Tools

Content knowledge Pedagogy Embedding in practice

140 separate topics in the SET, 1051 different statements for evaluation

the Self Evaluation Tools

National Centre for Excellence in the Teaching of Mathematics

The most evaluated to date are:

- KS1& KS2 (primary) Using the History of Mathematics
- KS3 Numbers and the History of Mathematics
- KS4 Algebra

The most 'least confident' are:

- Using the History of Mathematics

.....very positive about using SETs to identify strengths and weaknesses. ... liked the idea that there was enough information in the examples to ensure that participants fully understood what was being covered and therefore everyone in the team was clear about 'level' and content --and where to go next if they wanted!

over 10,000 users: about 3500 KS2, 2000 KS1
1100 for KS3 and 4, approaching 500 for KS5, 3000 FE, adult and others

What Makes A Good Resource - Always, Sometimes, Never

Last updated 06 April 2010

To add two fractions together

$n^2 + n + 11$ is a prime number for a natural number

Is that true?

Is that true?

I did

action

ments

I was

what their understanding of multiplication and division

programme of study and Functional Skills and so a

Funded projects

National Centre for Excellence in the Teaching of Mathematics

- Over 323 awards since September 2006
 - £5k to £1k (initially some of 25K)
 - 10 rounds of applications
- Plus over 150 Regional Projects... growing demand

NCETM funded projects

National Centre for Excellence in the Teaching of Mathematics

Project leader

"This project really empowered a group of subject leaders to develop mathematical reasoning in their schools. As well as having an impact on the learners in their classes, they found it to be a highly effective vehicle for deep and lasting professional development"

Statistics

National Centre for Excellence in the Teaching of Mathematics

The table below shows the number of users for the key sectors.

Sector	YTD (As at 12 th Sep 10)
Primary: 17 504 schools Teacher Population of 223 600	19 201
Secondary: 3367 schools Teacher Population of 29 500	17 659
FE 386 institutions	3 171
Teachers of adult learners not in FE Institutions: 250 000 in sector	4 908
Other registered users	10 324
Total	55 263 (includes 8 000 people who have ticked more than one sector)
Target	47 025

how many countries have not visited the portal?

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Only 8

- French Guiana
- Western Sahara
- Mauritania
- Chad
- Congo Brazzaville
- Guinea
- North Korea
- Turkmenistan

Assessing the Impact of the NCETM on Teachers and Learners

Final report

June 2010

Assessing the Impact of the NCETM on Teachers and Learners

Impact on pupils

"[The NCETM support was] one of the things that contributed to our grades going up so much. In the first year A*-C went up by 9%.... *secondary teacher and AST*

Impact on teachers

"The opportunity to develop our own CPD was a powerful tool that we all felt to be some of the most valuable CPD we had ever received" *Primary school teacher*

Impact on school

[NCETM] has had a huge impact [in my school] ... the confidence of the learners in school went through the roof and they absolutely loved their maths" *infant headteacher*

Supporting teachers to follow their own professional expertise

The NCETM enables the sector to help itself through self-improvement

This requires

- teachers with clear shared vision and strategy
- strong infrastructure

A Level entries in Mathematics, 1995/96 – 2008/09



5

Michael Gove, our new Secretary of State

...improving mathematics education is critical to the future prosperity of this country - and all its citizens

But.....

huge cuts in Government expenditure with many bodies to be discontinued from end of March 2011

The fate of the NCETM is yet to be decided.....

BUT we are working very hard for its sustainability somehow

...stick to what you believe in...
..the NCETM will try to support you.....



Thank you

