

London Central and West Maths Hub

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National Centre
for Excellence in the
Teaching of Mathematics

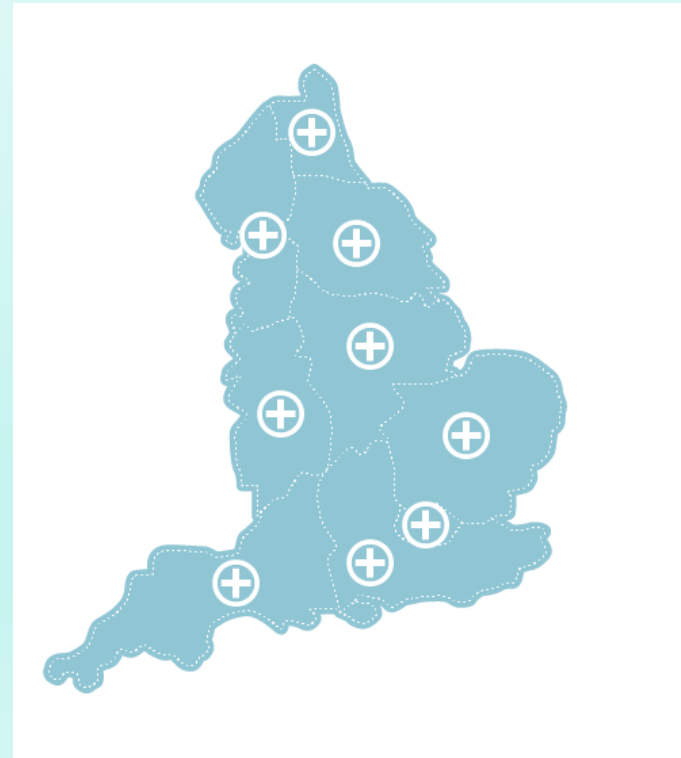
TRIBAL

MEI Innovators in
Mathematics
Education

Agenda of my discussion...

- The NCETM and the Maths Hubs programme
- Teaching for Mastery
- General structure of projects/workgroups
- Next year's projects (2017-18)
- Post-16 developments and Maths Hub Network
- How to get involved in the Maths Hub Network

- What is the Maths Hub Network?
- Why do Maths Hubs exist?
- What is the main aim across the Maths Hub Network?



What Maths Hubs Are Doing



What Maths Hubs Are Doing

Maths Hubs work together on National Collaborative Projects and through locally designed projects. In all projects, national and local, teachers and others collaborate in a Work Group, with set membership, objectives and means of evaluating outcomes. All work is led by teachers and most of the work falls, with some overlaps, into these six categories.



Teaching for Mastery



Leadership Development



Reasoning and Problem-Solving



Level 3 (Post GCSE) Maths



Curriculum, Resources and Qualifications

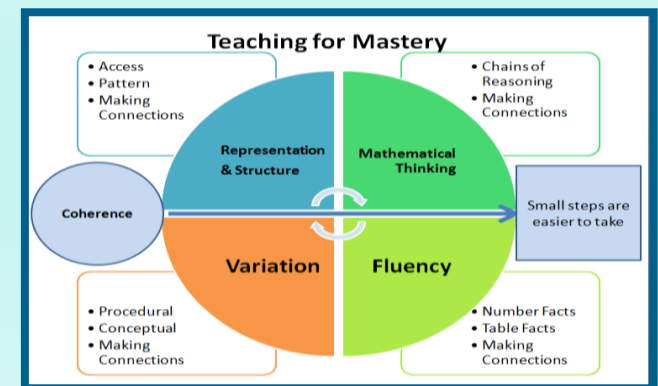


Supply of Specialist Teachers of Maths

Teaching for Mastery

- Teaching for Mastery programme

- Rejects idea that people ‘can’t do Maths’
- procedural fluency and conceptual understanding
- every attempt to keep whole class learning together
- challenge through analysis and intervention for support
- variation
- regular practise of facts



How are workgroups different to courses?

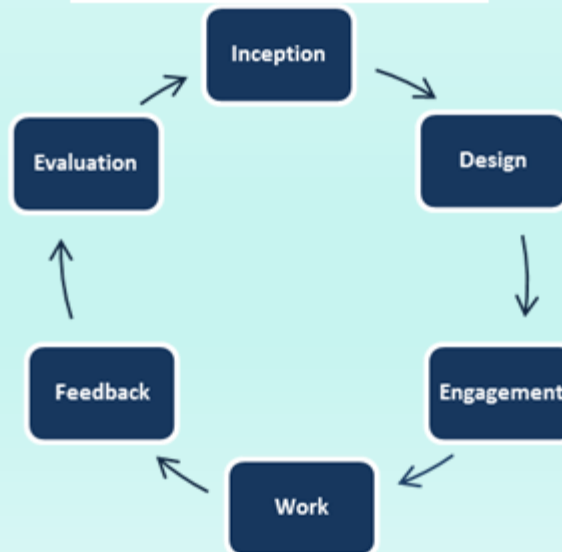
Outcomes



Work



Work Group life cycle



Materials/resources

- developed
- identified
- used differently

Professional learning

- mathematical knowledge
- mathematical pedagogy
- attitudes, disposition, beliefs

Pupil outcomes

- mathematical experience

Practice development

- planning
- teaching
- assessing

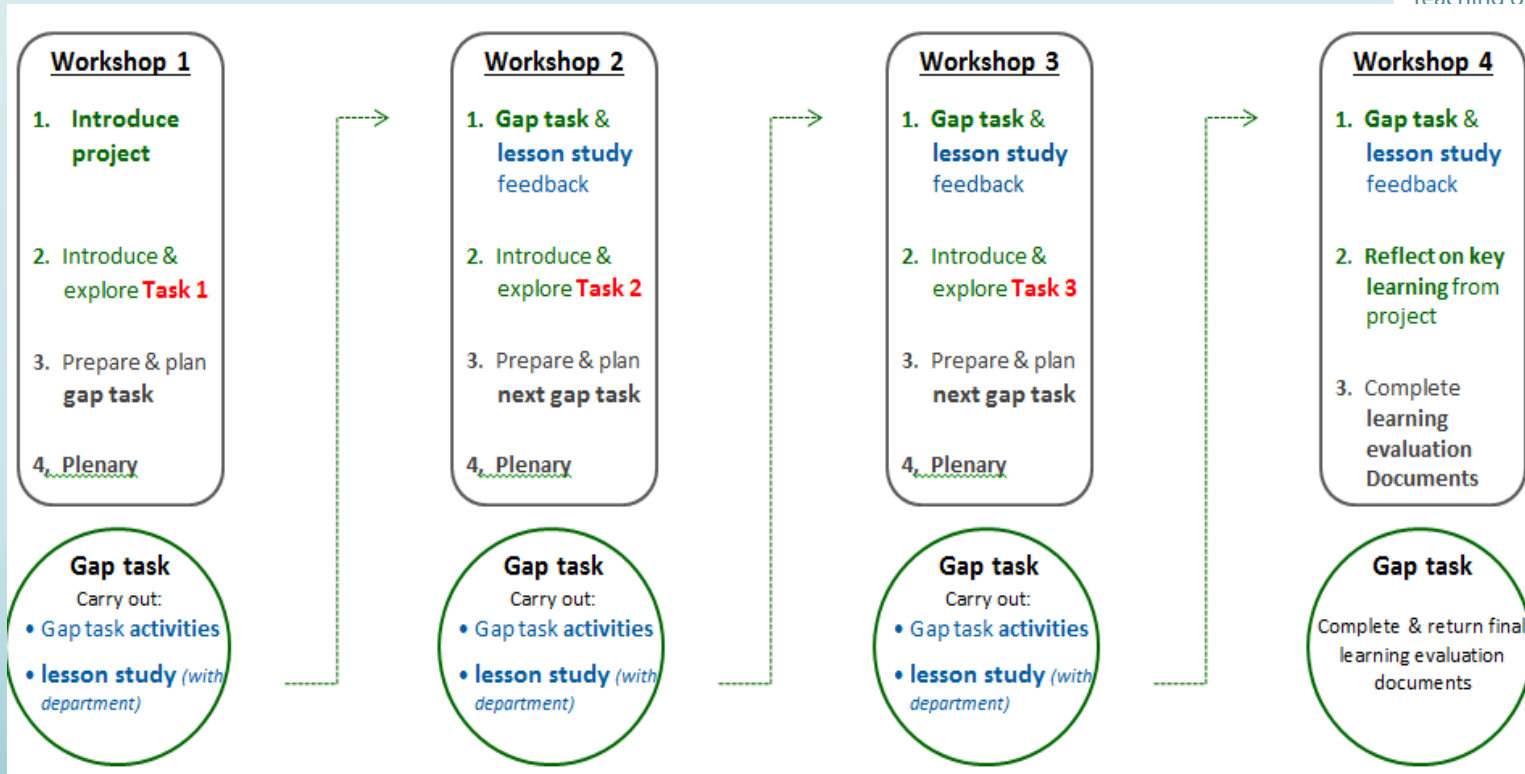
attitude to subject and learning

age, skills, understanding



An example of a workgroup from last year

KS3 Reasoning - structure



Planning for Student Responses

- What did you think of the questioning script?
- Would it help less experienced staff? NQTs?
- Can we design our own?

Projects coming up in 2017-18

- Mastery – Primary (Cohorts 1,2,3)
- Mastery – Secondary (Cohort 1 cont.)
- Shanghai-England Exchange (6th Nov WLFS)
- EYFS Workgroups (counting/language)
- Primary SK – NQT/NQT+1, Picture Books, Primary Leaders
- Focused issues around Mastery focusing on two strands (lesson design and looking at greater depth)
- Maths SLE School Improvement
- Mathematical Thinking for GCSE
- Y5-Y8 Continuity
- Challenging topics at GCSE
- **PD Leads – Secondary/A Level**
- **Local Leaders of Maths Education Network**
- **MEI TAM Course**

Maths SLE School Improvement

All the current Maths SLEs provide model through a 2 support approach
This work group's aim is to have a Maths SLE working with a group of schools who would like improvement in Mathematics
It is likely that the schools involved will nominate one or two teachers with maths leadership responsibility to work more closely with an SLE both in our hubs and school visits. It would be expected that the head teacher would also engage with the SLE.

Expectations of school knowledge:

- Central workshops
- 2 school visits for each participant school
- schools to be expected to do staff meetings and work on their own practice

Mathematical Thinking for GCSE

Reasoning and problem solving are identified as areas of weakness both in teaching and schemes of learning
With the emphasis on the new curriculum on fluency, reasoning mathematically and solving problems, many departments will be thinking about how best to build these skills
This workshop is building an KS3 Reasoning Project over the last two years
It will continue to be regularly monitored and evaluated

- 4 central workshops
- 2 pilot/mentor study between each workshop
- ideally two people from each school to attend with one of the participants having leadership responsibility

Challenging Topics at GCSE

With the new GCSE, a number of topics were consistently proving to be challenging. With the 'new' GCSE, this theme continues
It is likely that the list of challenging topics will have changed (composition or nature) - therefore a workshop will be drawing on an evidence base of challenging topics and explore effective ways of teaching some of these topics
Pupils will be involved in this workshop - their views will be sought and there will be assessment activities

15.18 Continuity

There is evidence that many children miss this project across KS2 and do not have a high level of fluency
With emphasis on mental fluency in primary, there is a need for Secondary teachers to understand what this means and the impact it is having on the children's mathematics
There are 3 months for this workshop
Get in touch with your head teacher to see which year they are looking at

PD Lead opportunities - Secondary and A Level - all need applicants

Promotion of high quality collaborative professional development so there are enough people with the skills, but also the ability to lead
Training programmes will run (Primary, Secondary and A Level) so that professionals will be NCEM Accredited PD leads, who will then form a massive part of the Local Leaders Network community
3 Central training days spread across the year (Sep/Oct, Jan/Feb, June/July)
£400 per participant

Local Leaders of Maths Education Support Network

Local Leaders of Mathematics Education are people who are working beyond their own institution
One aspect of support is the above PD Lead Accreditation, however there is a need for further support through an ongoing LLE network
If you are part of this network, you will work closely with the Maths Hub Lead school and regional teaching school networks
This network will develop appropriate and on-site maths education professional development knowledge
Members of the network will continue to develop their maths education local leadership practice
Network members will be kept up-to-date with relevant research, policy reports and pedagogy materials
In the Spring term each year, there will be three or four one-day pan-regional conference for all members of the network

Post-16

- Improve skills of teachers who will be teaching the new maths GCSE for the first time to re-sit students
- Increase participation in Level 3 Mathematics
- Ensure teachers are well-equipped to teach the post-16
- Increase girls' participation in post-16 mathematics
- Reduce regional variation in the uptake of the mathematics post-16

How to get involved

- Find your local Maths Hub

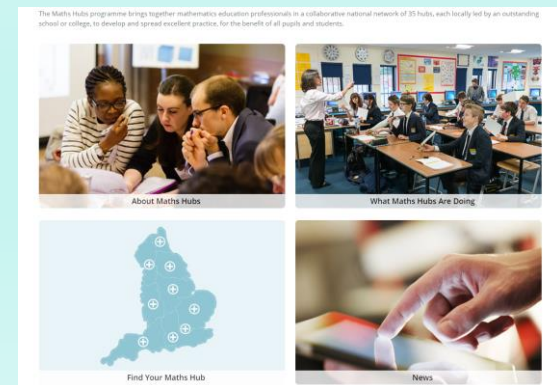
<http://www.mathshubs.org.uk/find-your-hub/>

-Twitter @Ldncandwmathshb

-Email your local hub to get onto their mailing list:

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-Get in touch about the need in your school/area as there is still room in some cases to put forward innovation ideas for workgroups



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