



Primary Mathematics PD Day 'Problem Solving and Reasoning'

Saturday 11th November 2017 10.30am to 4.00pm (registration from 10.00am)
Wycombe High School, Marlow Road, High Wycombe, Buckinghamshire HP11 1TB

Debbie Morgan (Director for Primary Mathematics NCETM)

Debbie Morgan holds a national role as Director of Primary mathematics at the National Centre for Excellence in Teaching Mathematics. She is an expert in the field of teaching for mastery and leads on the national government funded programme. She has extensive experience in primary mathematics and has been involved in the development of the popular CBeebies programme *Numberblocks*.

'Mastering Problem Solving'

How do we actually enable children to become effective mathematical problem solvers? Do we do this by giving them lots of problems to solve, or is there more to it? This session will take a fresh look at problem solving within the context of *teaching for mastery* and consider how it is developed.

Workshops throughout the day include the following:

Julia Brown – Working with Parents

This workshop will look at ways of engaging with parents to increase their knowledge and understanding of the use of problem solving in their children's maths lessons. We will look at some activities which can be used with parents and the materials published by the MA to support this work.

Ruth Bull - Promoting mathematical thinking through opening up problems

This session will look at how to 'open' problems up to provide opportunities for deeper mathematical thinking and reasoning. It will look at closed and open problems and the importance of 'noticing things' in order to work towards solutions. We will consider aspects of variation within problems in order to encourage further reasoning. The session will be suitable for teachers in KS1 or KS2.

Katie Crozier – Teaching Multiplication with Deep Conceptual Understanding

This workshop will explore how deep conceptual understanding and visualisation of multiplication can be developed through exposing structure and making connections. Part of the workshop will explore the use of the Numberlink Board™, developed through action research in the Y4 classroom, to teach multiplication facts with understanding.

Sue Keith – Problem Solving for all

This session aims to explore ways to support learners with SEND when undertaking problem solving activities. It will provide practical ideas for support that have been tried and tested within mainstream and special need settings to support pupils as well as provide some activities that can be used in the classroom.

Jane Liddle - Not making a rod for your own back

An exploration of the use of Cuisenaire Rods to promote reasoning and generalising, and using the rods flexibly with children to build deep learning.

Brenda Robertson - Budding problem-solvers – Problem solving and reasoning in Early Years

During this session, we will consider how to ensure that Early Years provision fulfils the curriculum expectations for developing problem-solving and reasoning skills across the board, whilst maintaining the rigour in learning.

Rachel Walters - Maths Enrichment: Ideas to help you organize events at your school

Ideas to help you organise special events at your school (including Masterclasses and Team challenges)

Workshops will be repeated throughout the day with up to four at each session.

Time	Event
1000-1030	Registration and refreshments
1030-1130	Opening Plenary
1130-1140	Break
1140-1240	Workshop 1
1240-1330	Lunch and MA publications
1330-1430	Workshop 2
1430-1440	Break
1440-1540	Workshop 3
1540-1600	Refreshments and evaluations

The event is being held on a Saturday to avoid problems with cover. It is priced so that schools can afford to send two members of staff (about half the price of a typical LA course) - staff who enjoy the day's training together, and are more likely to discuss and implement what they have experienced on their return to school.

The cost of the day is £70 for members of The Mathematical Association, £95 to non-members who will receive a £25 voucher redeemable against membership. All members of a school with Institutional Membership are entitled to come at the members' price. These prices are for booking direct with The Mathematical Association – contact conference@m-a.org.uk. Publications from The Mathematical Association will be on sale on the day, together with materials from Propeller.

We provide a lovely lunch and refreshments, and do everything possible to make it a great day out for those who attend.

The feedback on last year's sessions was excellent. Please do consider sending at least one member of staff, as it is rare to have so many experts in the field of primary mathematics together for the day. It really is an opportunity not to be missed! Event details and application form can be downloaded from our One-Day Events page at <http://www.m-a.org.uk/primary-events>

We will contact delegates nearer the time giving more detailed directions and the finalised schedule for the day.

We reserve the right to change the programme. –Keep an eye on the MA website at <http://www.m-a.org.uk/primary-events>

No refunds are given once a place has been booked, but other names can be substituted if the person registering cannot attend.