

MATHEMATICAL ASSOCIATION



supporting mathematics in education

Welcome to the MA monthly newsletter

The Mathematical Association  
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Email: [office@m-a.org.uk](mailto:office@m-a.org.uk)

September 2018



The Primary Mathematics  
Professional Development Day

Saturday 13th October 2018  
At Wycombe High School

KEYNOTE  
SPEAKER  
—  
Mike  
Askew

## SAVE THE DATE

### Reasons to Love Reasoning

OPENING PLENARY:

**Mike Askew**

PLUS ADDITIONAL WORKSHOPS FROM:

- Katie Crozier & Claire Gerrard** Numberless Word Problems: How to encourage mathematical reasoning and avoid 'number-plugging'
- Alison Eves** Using Systematic Reasoning to Solve Problems ... and have fun!
- Sue Gifford** Developing Pattern Awareness in the Early Years
- Ray Huntley** Developing Reasoning to Support Problem Solving
- Laurie Jacques** Teaching with Variation: Planning for key points, difficult points and critical points in learning mathematics
- Jane Liddle** Mastery beyond Number and Calculation
- Lucy Sayce-Browne** Let's Talk about Reasoning

*Celebrating the 7th ANNUAL YEAR*



More information at [www.m-a.org.uk/one-day-events](http://www.m-a.org.uk/one-day-events)  
Email [conference@m-a.org.uk](mailto:conference@m-a.org.uk)

Primary Mathematics Professional Development Day

The 7th Primary Mathematics Professional Development Day, 13<sup>th</sup> October 2018 at Wycombe High School.

The Mathematical Association in cooperation with Bucks, Berks and Oxon Maths Hub are holding the Seventh Annual Primary Professional Development Day on Saturday, 13th October 2018 at Wycombe High School, High Wycombe, HT11 1TB, Buckinghamshire.

**Title:** Reasons to Love Reasoning

**Keynote Speaker:** Professor Mike Askew

More details: <http://www.m-a.org.uk/primary-events>

## Order Now! Primary Mathematics Challenge 2018/19

The Primary Mathematics Challenge is a fun and exciting mathematical challenge aimed at pupils in **Years 5 and 6 England and Wales, P6 and P7 in Scotland, and Years 6 and 7 in Northern Ireland**. The PMC is designed not to be just another test in the school year. We are of the belief that the PMC encourages enthusiasm, boosts confidence in mathematics and shows the different way questions can be asked. We believe in the importance of problem solving as a means of helping pupils develop their reasoning skills.

The 2018/19 Primary Mathematics Challenge will take place the week beginning **12th November 2018**. Orders are now open at <https://members.m-a.org.uk/PMC-Registration>.



**One Day Conference for  
Scottish Teachers of  
Secondary Mathematics**

**29th September 2018  
University of Stirling**

Opening Plenary  
**Maureen McKenna, OBE**

## 13th Annual One Day Conference for Teachers of Secondary Mathematics

**When: 29 September 2018**

**Where: University of Stirling, Stirling FK9 4LA**

**Online Booking Now Open**

Keynote Address by Maureen McKenna, OBE, Executive Director of Education, Glasgow City Council

Click [here](#) for more information.



### **Branch Events**

**Branch:** Liverpool

CHRISTMAS LECTURE - sponsored by Department of Mathematical Sciences, University of Liverpool

**Title:** Enigma and the Secret World of Code Breaking

**Summary:** For as long as we have had secrets we have had secret messages. We present a look at the fascinating history and mathematics of codes and code breaking - from ancient Greece to the present day - including a demonstration of an original WWII Enigma Machine!

**Presenter:** James Grime, University of Cambridge.

Dr James Grime is a mathematician and public speaker. James now runs The Enigma Project and travels the world giving public talks on the history and mathematics of codes and code breaking. James is also a presenter of the YouTube channel numberphile.

**Date:** Thursday 13th December 2018

**Time:** 2pm

**Venue:** tbc

See [website](#) for updates

**Branch:** Sussex

**Title:** The Room in the Elephant

Suitable for students in Y9-Y13, this is a talk about many aspects of area, but not the aspects found in textbooks!

**Presenter:** Chris Pritchard

**Date:** Tuesday 4th December 2018

**Time:** 4:30pm

**Venue:** Lancing College,

**Venue address:** Lancing, BN15 0RW

**Branch contact name/email:** Dr. Paul Harris [p.j.harris@brighton.ac.uk](mailto:p.j.harris@brighton.ac.uk)

**Branch:** London

**Title:** Every class is a mixed attainment class

**Summary:** In this session we start with the idea that every class contains students with a mix of attainments, interests, stickability, and stuckability! As

such, offering students accessible tasks which can be developed to different depths is an essential part of lesson planning. Participants will be invited to work on some mathematics and intersperse this with discussions about how any of the tasks might be simplified or extended. The tasks will be suitable for learners from Year 5 to Year 11 but it is likely that the ideas will be applicable to all ages.

**Presenter:** Mike Ollerton

**Date:** Saturday 24<sup>th</sup> November 2018

**Time:** 10 am – 12.30 pm

**Venue:** UCL Institute of Education

**Venue address:** Room 802/804, 20 Bedford Way, London WC1H 0AL.

**Branch contact:** [Mark Horley](#)

**Door charge:** £10 collected in cash on the door, unless you have already attended an event this academic year and already paid your £10. All sessions are free for Trainee Teachers in their initial training year.

Please sign up via [Eventbrite](#).

**Branch:** Meridian

**Title:** A Lesson Without Opportunity To Generalise Mathematically, Is Not A Mathematics Lesson

**Presenter:** John Mason

**Summary:** Participants will be invited to consider this conjecture by engaging in tasks which highlight the central role of generalisation in every mathematics lesson, from KS1 through KS4 (and of course beyond!).

**Date:** Monday 15<sup>th</sup> October 2018 (NB date was 30/10/18)

**Time:** 4.30 pm (refreshments 4 pm)

**Venue:** London Road Campus, University of Reading

**Cost:** £5 (includes a £5 book token redeemable at bookstalls on the day)

**Branch contact:** Please email any enquiries to Laura Teague

**Branch:** Liverpool

**Title:** Computing the Future

**Presenter:** Richard Pinch (formerly Strategic Advisor, Mathematics and Security Research at GCHQ)

**Date:** Thursday 11<sup>th</sup> October 2018

**Time:** 5.30pm – 6.30pm

**Summary:** New ways of computing, not based on the further micro-miniaturisation of silicon circuits, are emerging as practical realities. The arrival of quantum computing is now a practical consideration for large companies and national and international bodies; and looking a little further ahead, data storage and processing based on the biological properties of DNA have been demonstrated in the laboratory.

Quantum computing is the new buzzword -- Richard Pinch has been looking into what computers will look like after quantum tech arrives and what newer ideas are still on the drawing board. Mathematics -- old, new and as

yet unknown -- will be the key to developing and exploiting these new technologies.

This talk is for Year 11 up, teachers and all those interested in mathematics and its applications.

**Venue:** tbc

**Branch contact:** Peter Giblin

**Door charge:** Free to all students and members of LivMS. Others pay £4.

**Branch:** London

**Title:** Developing mathematical fluency through "Etudes"

**Summary:** This session will explore some 'mathematical etudes' that are intended to develop students' fluency in important mathematical processes in ways that are more interesting than traditional exercises.

For our first session of the year, we are thrilled to welcome Colin Foster, Associate Professor of Education and Director of Research in the School of Education at the University of Leicester. Colin has written nearly 200 articles, both academic papers and articles for teacher professional journals, as well as 13 books many of which can be freely accessed at <http://www.foster77.co.uk>. In this session, Colin will share some 'mathematical etudes' that are intended to develop students' fluency in important mathematical processes in ways that are more interesting than traditional exercises. We will discuss how such tasks can be designed and used in the classroom.

**Presenter:** Colin Foster

**Date:** Saturday 6th October 2018

**Time:** 10 am to 12.30 pm

**Venue:** UCL Institute of Education

**Venue address:** Room 802/804, 20 Bedford Way, London WC1H 0AL.

**Branch contact name and email:** Mark Horley


**Door Charge:** £10 (cash to be collected on the day) which will also cover you for the 5 remaining sessions of the 18/19 academic year. Free for Trainee Teachers in their ITT year. Receipts will be provided on request. Please sign up via [Eventbrite](#).



## Journals News

In the middle of September, according to an individual's membership package, some or all of the following should have been received: Primary Mathematics; Mathematics in School; SYMmetryplus.

The Gazette team is hard at work finishing off the November issue!



## Sign up for the Annual Conference

Please sign up for our joint MA/ATM Annual Conference in 2019 at Chesford Grange, Warwick from **15-18 April**. The theme of the conference will be Mathematics. Collaboration. Creativity. You can sign up [here](#).



## Padlock Challenges – Rachael Horsman



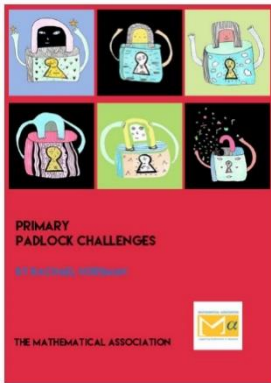
Padlock Challenges are a motivating, innovative and practical way to enable students (Key stage 3 and 4) to engage with Number and Algebra, Statistics and Probability and Geometry. Each book has a comprehensive set of worksheets from which teachers can construct their own pupil booklets or classroom posters containing a selected set of challenges. Each challenge is carefully constructed to enable students to gain confidence and skills. The conclusion of each challenge is a number determined by their answers, collectively these lead to the combination for a padlock, and the route to opening a designated treasure box secured with a chain and combination lock. Find the combination – gain the treasure within!

Each book is priced competitively:

Non-Members £10.00

Members £7.00

**Coming Soon - Primary Padlock Challenges**  
**Rachael Horsman**



This exciting new book for KS1 and KS2 from Rachael Horsman, follows the same format as the very successful KS3 and KS4 Padlock Challenge series. As per the format of the previous books, it has a comprehensive set of worksheets from which teachers can construct a set of challenges. Each of the challenges is constructed to enable students to gain in both confidence and skills. The conclusion of each challenge is a number determined by their answers and collectively these lead to the combination for a padlock. The route to opening a designated treasure

box secured with a chain and combination lock follows. Find the combination – gain the treasure within.

We are sure that primary level pupils will find this book exciting and challenging.

Non-members £9.00

Members £6.30

**PMC participating schools can pre-order this book for £8.50**



## Can you help?

Watch out for forthcoming vacancies on The Mathematical Association Council - these will be advertised in the imminent MA News.



## 2020 Conference Announced

The MA is delighted to announce that the 2020 Annual Conference, *From Exploration And Imagination To Insight*, will be held at Wyboston Lakes Resort, Wyboston, Bedfordshire from 7 - 9 April 2020. More information will be available at <https://www.m-a.org.uk/conference-2020>.

We have invited AMET, ATM, NAMA and NANAMIC to a jointly badged conference and hope that we can begin planning with those associations that wish to participate in December this year.





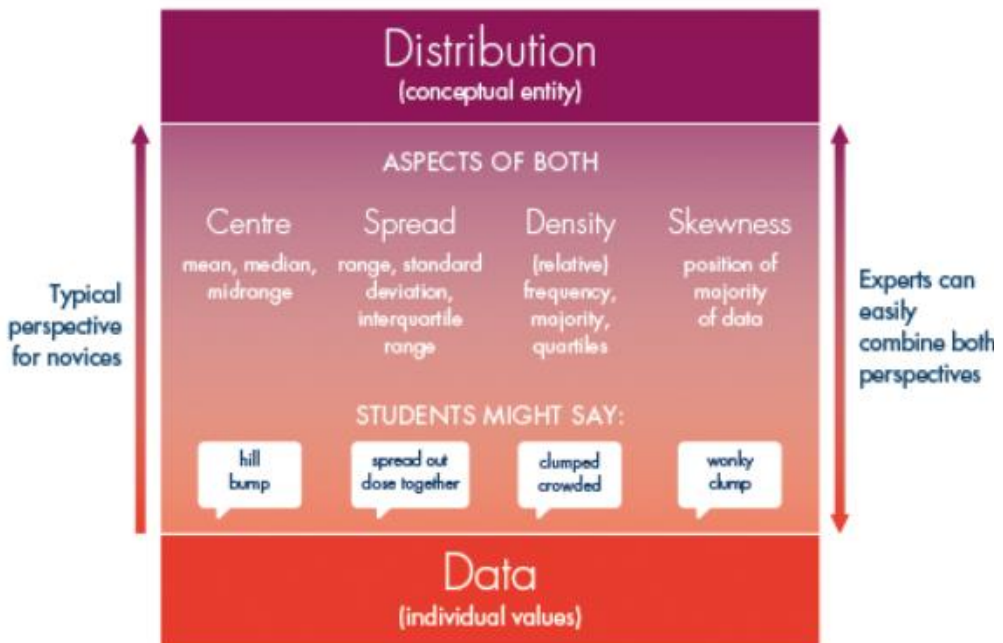
## MMSA's proposal for a single mathematics subject association

The Meeting of the Mathematics Subject Associations (MMSA) has brought forward the proposal below for a single mathematics subject association and has circulated it to the governing bodies of all five associations involved in MMSA in order to seek views concerning the proposal. If you have views about the proposal please send them to the Council of The Mathematical Association via Tom Roper using the e-mail address [ropertom@outlook.com](mailto:ropertom@outlook.com). Please read the draft proposal [here](#).



## New Espresso Released

You can read the new Espresso from Cambridge Mathematics, asking the question 'What does research suggest about effective ways to introduce comparison between data sets?', [here](#).



A structure to show the relation between data and distribution  
(adapted from Bakker & Gravemeijer, 2004)

