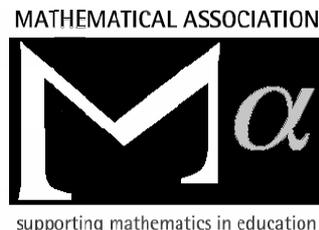


# The Mathematical Association Secondary Education Mathematics Conference

**Saturday 6<sup>th</sup> September 2014**  
Pathfoot Building, Stirling University



## PROGRAMME

09:00-09:30	Registration and Coffee
09:40-10:20	Keynote Address: <b>Lynne McClure</b>
10:30-11:20	Talks/Workshops/Discussion Groups 1
11:25-12:15	Talks/Workshops/Discussion Groups 2
12:15-13:15	Lunch
13:20-14:10	Talks/Workshops/Discussion Groups 3
14:15-15:05	Talks/Workshops/Discussion Groups 4
15:10	Depart: Tea and Coffee available

## IMPORTANT INFORMATION FOR APPLICANTS

*No invoices will be sent – so please do not ask*

Receipt of the conference fee will book your place, and confirmation will be sent by email (email address required). Fees are non-returnable.

Cheques should be made payable to **The Mathematical Association** and sent to:–

Marcia Murray (2014 Stirling Conference)  
The Mathematical Association  
259 London Road  
Leicester LE2 3BE  
Tel 0116 2210013

An application form is enclosed.

## PROGRAMME

### OPENING SESSION

**Keynote Speaker:**

**Lynne McClure**

*(President of The Mathematical Association)*

*Changes to the mathematics curriculum: threat or opportunity?*

Lynne will explore what happens to teachers' expectations when curricula across the UK and the associated assessments change.

*Lynne was appointed as NRICH project director in March 2010. Immediately before joining NRICH, she lived in Scotland where she worked with beginning teachers at Edinburgh University, and led her own very successful consultancy into maths education which took her all over the world. Until last year Lynne was a member of ACME, the advisory group which consults to ministers. She recently chaired the redrafting groups for the primary and secondary English national curriculum documents for mathematics.*

**For programme updates visit: [www.m-a.org.uk](http://www.m-a.org.uk)**

## Workshops/Talks/Discussion Groups

### A) **Scottish Survey of Literacy and Numeracy – What do the results tell us about numeracy across Scotland and addressing key areas for development?**

*Carol Copstick*

What is the Scottish Survey of Literacy and Numeracy (SSLN)?

What was the national picture of numeracy and what are the key priorities for improving numeracy?

Why was the SSLN Numeracy Professional Learning Resource produced and how can it be used to support numeracy development?

### B) **Engaging and motivating young people in mathematics**

*Fiona Phillips*

From Twitter to Twig this workshop will look at different ways Alness Academy Maths department is trying to engage and motivate pupils from S1-S6.

Using social networking, collaborative learning, ICT and others...

### C) **Forget Greek Mythology....Here's Geek Smithology**

*Chris Smith*

Chris Smith teaches Maths at Grange Academy, Kilmarnock. In his debut session at the MA Stirling Conference, he'll blather about two of his biggest passions; imparting excitement about Maths to his students and sharing creative lesson ideas with other teachers from across the planet!

### D) **Rigour & Recreation**

*Clive Chambers*

Be prepared for a new mixture (as always) of fascinating items, any one of which you could fit into a class programme somewhere, sometime. Topics for this talk include Euclid's Bridge of Sighs, Card tricks and Markov Chains, Numbered Pentominoes, Polynomial Expansions, further Unusual Proofs and some questions designed to make you wonder.

### E) **Dynamic investigational approaches to teaching and learning Calculus**

*Alan Catley*

Alan will demonstrate one of his favourite topics: how to introduce and develop Calculus.

### F) **Promoting Higher Order Thinking Skills in Maths using Apple iPads**

*Fiona Provan*

This workshop will look at some iPad apps and iPad based activities used in George Watsons' College Maths Department to encourage Higher Order Thinking Skills. We will look at apps including Socrative, Explain Everything, Inspiration and others. This workshop will have a set of iPads to have hands-on experience. You do not need to have any experience using an iPad in a classroom, just a curiosity in how this technology can be utilised.

### G) **A brief history of cryptology**

*Méadhbh Boyle*

With the advancement of computers and the ever growing need for data to be kept securely, cryptology is an area that affects all of us. We will take a look at some important ciphers, from the Caesar cipher to the RSA cipher. We will also look at some of the mathematical challenges facing cryptographers.

## **H) Creating 'rich' tasks**

*Helen Martin*

During this session we will be exploring some examples of redesigning common questions to create rich tasks involving multiple representations, learner generated examples and solution methods based on the work of Susan Wall, Malcolm Swan and Anne Watson.

## **I) Teaching the New N6 Higher Mathematics Course**

*Monica Kirson*

Monica will present North Lanarkshire's agreed order of topics for the new CfE N6 Higher Mathematics Course. She will outline the order of topics, timings, resources, the use of assessment and revision materials which will give you a complete learning and teaching structure to ensure candidates are prepared for the New N6 Higher Mathematics Exam.

## **J) What do I do if ... ?**

*Fiona Allan*

.... I am suddenly told to cover a Maths class for which no work has been set?  
.... I am driving to work and realise I haven't prepared for one class?  
.... I feel ill and haven't time to prepare properly?

## **K) Using NRICH tasks in the classroom**

*Alison Kiddle*

In this workshop, Alison will share some of the latest Secondary resources on NRICH and explore how they can be used in the classroom.

## **L) How to teach any number base in 10 minutes**

*Andrew Jeffrey*

This seems quite relevant given that coding is being given greater prominence at the moment, so bases 2 and 16 are important. If you would like to see how it runs and some of challenges the pupils face then come along and join in!

## **M) Using the Numeracy SSLN Professional Learning Resource**

*John Sexton*

This session will provide a tour of what is available.

## **N) Old and New: HIGHER**

*Linda Moon and Peter Richmond*

What is the difference? What makes a difference to your learners and what can make a difference to their result? Plus how to make a difference in your marking for feedback, prelims and evidence.

## **O) 14, 15, 16**

*Phil Moon*

Feedback from the 2014 AH Maths paper, how it can help teachers better prepare pupils for the 2015 exam and the changes for the new qualification from 2016 onwards.

*Continued overleaf*

**P) The Eternal Triangle**

*Adam McBride*

We shall go for a stroll through the wonderful world of triangle geometry. On our travels we shall find a few surprises as well as results of great beauty, with lesser known names such as Morley and Feuerbach rubbing shoulders with giants such as Euclid and Euler .

**Q) What? Not another Whistle Stop Tour!**

*Rachael Horsman*

During this session will try out a variety of activities designed to engage pupils in their learning, develop their understanding and problem solving skills, and also to realise how much fun maths can be. Be ready to complete some maths, win some prizes and enjoy working together. All the resources shared will be available via drop box and most are easily adaptable for different ages and abilities.

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For your record

Your choices	1	2	3	4	5	6
Workshop/Talks/Discussion Group						

**MA Bookstall**

A stall will be available for delegates to see the wide range of material which is produced. It will be an opportunity to buy at special conference rates and also for non-members to join.

**Come prepared!**

Preview at:

<http://www.m-a.org.uk/jsp/index.jsp?lnk=910>