

Dear Colleague,

We hope you have had a good year and are looking forward to the summer break. We have had a very busy and successful year and are planning for what promises to be another exciting year for the Hub.

A key event for your diaries during the first term is our annual Conference. This will take place on 13<sup>th</sup> November at The Harbour Hotel, Southampton. We are delighted to welcome back Andrew Jeffrey, The Mathemagician, as one of our keynote speakers. We are also pleased to announce Alex Bellos (author of several best-selling maths books and the inventor of elliptical pool) and Nick Mclvor, Advanced Skills Teacher of Mathematics at St Marylebone High School in London, as our other keynote speakers for the day.

The cost of this event will be £60.00 pp, which includes lunch and refreshments, and is available for booking via our website: [solentmathshub.org.uk](http://solentmathshub.org.uk).

For 2019-20, we are pleased to be able to offer you the following Work Groups. These will be available for booking via our website soon but if you would like to register your interest now, please email [info@solentmathshub.org.uk](mailto:info@solentmathshub.org.uk). Please note all of our Work Groups are **free to attend**. Also, for those people who are travelling from schools on the IOW, the Hub will cover the cost of travel.

## Early Years

### Supporting Effective Transition from Reception to Year 1

Many schools are adopting a teaching for mastery approach in mathematics. The starting point for a school is usually Year 1 and then thought is given as to how the approach is built across KS1 and KS2. Schools naturally want to consider the teaching of mathematics in Reception and how the transition to Year 1 can best support children's learning.

The Work Groups in this project will start by exploring best practice in Early Years and how the principles might build a secure foundation in mathematics for transition into a teaching for mastery approach in Year 1. It will consider the curriculum – what children need to know and understand; approaches to planning and the inclusion of all children; and appropriate resources and contexts for effective learning.



### Developing Subject Knowledge

This work group will develop participant's mathematical subject knowledge in conjunction with understanding the pedagogy that underpins the teaching of it. Understanding of mathematical structures will be explored so participants gain a detailed understanding of how children learn early mathematical concepts.

## Primary

### Lesson Design

Refining understanding of good lesson design, and being able to use resources well, is a crucial element in developing teaching for mastery. Teachers in this Work Group will work together to plan exemplar lessons (drawing on new Mastery Professional Development Materials produced by the NCETM and Maths Hubs, and other sources of mastery resources for the classroom including textbooks) and in so doing will improve lesson design across their school.



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## Teaching for Mastery Mixed Age

The project will involve the trialling and reviewing of a range of approaches to deal with the issue of planning for mixed age classes in a mastery context. Participants will explore current work and case studies from the innovation Work Groups which have previously looked at this issue.

Teachers will be able to engage with the approaches in their own schools and evaluate the impact on pupils. The Primary Mastery Professional Development Materials will underpin the work and provide a structure for planning.

Participants will deepen their understanding of teaching for mastery and be able to use different models to deliver a mastery curriculum within a mixed age setting. They will also develop and begin to implement a coherent policy appropriate to the setting, to support teachers in designing and teaching lessons to meet the needs of learners from mixed age groups.

## Specialist Knowledge for Teaching Mathematics Programmes

This work group will develop their mathematical subject knowledge in conjunction with understanding the pedagogy that underpins the teaching of it. Understanding of mathematical structures will be explored so participants gain a detailed understanding of how children learn early mathematical concepts.

## TA Specialist Knowledge

TAs will develop knowledge of the pedagogy of maths teaching and understand how children think and where their misconceptions stem from. Participants will understand the role that certain representations, models and manipulatives can play in the development of pupils' understanding of number and calculation, particularly place value and proficiency. Those involved will get better at working within classes and with small groups of pupils; they will gain knowledge of practical ways to apply the skills and understanding developed during the programme.

## Secondary

### Year 5-8

Teachers from different phases will work together in this Work Group, to improve communication between Key Stages 2 and 3. They will have the overall aim of improving continuity of learning by pupils in the four years between Years 5 and 8. Participants in this project will take an aspect of the mathematics curriculum or a pedagogical approach as the focus for their work and develop a consistent approach to it through discussion, joint lesson design and delivery, observation and the development of documentation to support continuity.



### Mathematical Thinking for GCSE

Teachers or departments keen to address the reasoning and problem-solving challenges of the mathematics curriculum and its assessment at GCSE are encouraged to take part in this project. Work Groups will explore professional development activities focusing on practical and accessible classroom-based approaches. The activities themselves also offer a model for wider departmental engagement with professional development processes, and hence could provide the basis of an effective departmental improvement programme in this area.

### Challenging Topics at GCSE

Feedback from teachers and GCSE exam analysis indicates there are key areas of the curriculum that students continue to find challenging. This Work Group will explore effective ways of teaching some of these topics, both to address the

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immediate needs of the incoming KS4 students, but also, crucially, taking a longer-term view by considering development in KS3.

The aim will be to get to grips with all the underpinning content of a topic, exploring misconceptions and effective pedagogical approaches for each element. The approaches also contribute towards the development of a generic process which departments could use as a 'toolkit' to lead the improvement of teaching and learning in any identified area of the curriculum students find challenging.

## Post 16

### Supporting Core Maths

The success of Core Maths depends in part on the growth of the pool of teachers, schools and colleges with the necessary expertise, experience and enthusiasm to teach it. This project, run collaboratively by the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP), will contribute to the wider national effort to grow that pool, and embed Core Maths confidence and culture within school and college maths departments.



## Save the Date!

We will also be welcoming our Chinese teachers again and will be hosting Mastery sessions in March 2020. Dates are provisional at the moment, but we anticipate these will take place on 11<sup>th</sup> and 12<sup>th</sup> March.

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## MASTERY READINESS

Next year the Solent Maths Hub will be running the mastery readiness programme in Portsmouth again. With the release of KS2 data and KS1 data, you may feel that this programme would support your school in the development of mathematics.

The Mastery Readiness Programme is for schools that want to adopt teaching for mastery in maths, but would benefit from a staged approach.

Schools that are successful in implementing sustained and meaningful change through teaching for mastery have key foundations already in place.

These key foundations include:

- shared vision and culture around the importance of maths
- a belief that every child can achieve highly in maths
- a positive mindset towards maths amongst all staff
- good maths subject knowledge amongst teachers and TAs
- systems that maximise learning, such as timetabling, intervention, curriculum and pedagogical approaches
- teaching of arithmetical proficiency for all children, to support mathematical fluency by reducing cognitive load
- ongoing staff development, which is valued by all staff and senior leaders.

The Mastery Readiness Programme offers support and development in these areas. The programme is fully funded and will include half-termly workshops and half-termly school visits. The workshops will focus on the above principles and your half termly visits will provide follow up support to embed these principles.

Your Commitment:

- Release two teachers to engage in all events, supported by a nominated member of SLT.
- Give these teachers the opportunity to lead professional development in school.
- Actively support reflection and collaboration among staff in the pursuit of improvement.

Benefits:

The development workshops and bespoke support include:

- An introduction to mastery, how to prepare a school to be ready to implement teaching for mastery, initial steps both in leadership and in classroom teaching, and strategies for overcoming potential barriers.
- Support for the headteacher in addressing leadership issues related to mathematics and contributing to raising standards.
- Opportunity to work closely with other schools also developing mastery readiness.

Further details can be found at: <https://www.ncetm.org.uk/resources/52811>. If you are interested, please contact Jess Paul who will be able to provide you with further details. Jess will also be happy to arrange a visit to your school or phone conversation to provide more information.

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### Upcoming AMSP Events in the Solent

27-June	Solent Maths Teacher Network	<a href="https://amsp.org.uk/events/details/5977">https://amsp.org.uk/events/details/5977</a>
02- Jul	Statistics – Large Data Set – A Level Teacher CPD, Portsmouth College	<a href="https://amsp.org.uk/events/details/5834">https://amsp.org.uk/events/details/5834</a> <b>Fully booked</b>
03-Jul	Maths Inspiration – enrichment event for Year 9 and 10, Portsmouth	<a href="http://www.mathsinspiration.com/events/?id=87">http://www.mathsinspiration.com/events/?id=87</a>
05-Jul	Y12 Student/Teacher Problem Solving Conference @ Portsmouth University	<b>Fully Booked</b>
11-Jul	London KS5 Teacher conference	<a href="https://amsp.org.uk/events/details/5605">https://amsp.org.uk/events/details/5605</a>
11-Jul	Core Maths conference, Southampton	<a href="https://amsp.org.uk/events/details/5744">https://amsp.org.uk/events/details/5744</a>
12-Jul	A Level Decision CPD day, Southampton	Postponed until autumn term
16-Jul	GCSE Conference – making connections, London N1	<a href="https://amsp.org.uk/events/details/5546">https://amsp.org.uk/events/details/5546</a>
12-Nov	Raising Confidence with reasoning in the GCSE classroom, Portsmouth	<a href="https://amsp.org.uk/events/details/5902">https://amsp.org.uk/events/details/5902</a>
5-Feb 20	Raising Confidence with Problem Solving in the GCSE classroom, Portsmouth	<a href="https://amsp.org.uk/events/details/5903">https://amsp.org.uk/events/details/5903</a>
5 Mar 20	Raising Confidence with Higher Mathematics in the GCSE classroom, Portsmouth	<a href="https://amsp.org.uk/events/details/5904">https://amsp.org.uk/events/details/5904</a>

Subsidies are available for State Funded Schools and Colleges in Portsmouth and Southampton local authorities. For further details please see <https://amsp.org.uk/about/subsidies>

Please sign up to stay informed on the latest courses and AMSP <https://amsp.org.uk/subscribe>

The AMSP would like to visit and offer tailored and bespoke plans to help develop level 3 Maths across the region. This includes 11-16 schools where support can include signposting pathways, enrichment events with students and development work with teachers. For further information please contact [Yvonne.Scott@amsp.org.uk](mailto:Yvonne.Scott@amsp.org.uk) , [Alison.Terry@amsp.org.uk](mailto:Alison.Terry@amsp.org.uk) ,(Area Coordinators) or [will.warne@amsp.org.uk](mailto:will.warne@amsp.org.uk) (Regional Lead for the South region).

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