

Secondary & Post-16

WINTER CONFERENCE

We are delighted to reveal our **FREE Secondary and Post-16 Winter Conference!**

You and every member of your department are invited to sign up to the sessions listed as part of our Conference Week. Simply, click on the registration link. All sessions will be delivered on Zoom and by a Mathematics Specialist. Whilst you are very welcome to attend all the sessions, there is no pressure to do so. You can choose the ones that will have the most impact on your professional development. If you attend 3 live sessions throughout the week, we will send you all of the sessions as a recording to watch at your leisure.

Monday 30th November

3:30pm - 4:20pm | Teaching for Mastery: Lesson Design at KS3

This session will focus on the 5 Big Ideas of Teaching for Mastery; Representation and Structure, Mathematical Thinking, Fluency, Variation and Coherence in the context of lesson design. Using the NCETM PD Materials, a model lesson will be shared through the session with opportunities for delegates to ask questions and discuss how they can take the principles back in to their classroom. The lesson will be a KS3 lesson however the principles could be applied to KS4.

[Register your place!](#)

4:30pm - 5:20pm | Fractions from KS2 to KS3 - Piecing Together the Missing Parts

Fractions is the topic that is often cited as one where pupils lack conceptual understanding which hinders their attainment in KS3. In this session, we will look at how fractions may be taught in KS2 and how this may provide children with the foundation they need to achieve success in related KS3 content. This session would be well suited to KS3 teachers working with pupils who have gaps in their understanding of using the 4 operations with fractions.

[Register your place!](#)

5:30pm - 6:20pm | Arithmetic Proficiency and Working Memory

Maths anxiety is commonplace in classrooms in the UK. There can be many causes, but the lack of number facts or derivation strategies can be a major factor in this. Students can be frustrated having to recall facts from memory, quickly leading to frustration and a sense of feeling overwhelmed. This session will look at the importance of arithmetical proficiency and consider what can be done in our classrooms to overcome this.

[Register your place!](#)

Tuesday 1st December

3:30pm - 4:20pm | Mathematical Thinking and Reasoning

This session will focus on mathematical thinking skills. Mathematical thinking is central to the deep and sustainable learning of mathematics. What does mathematical thinking look like in your classrooms? We will investigate how looking for patterns, relationships and connecting ideas can help children reason logically, explain and prove their thinking. There will be opportunities to look at how to easily incorporate mathematical thinking into your lessons through a variety of activities.

[Register your place!](#)

4:30pm - 5:20pm | Distributive Law - KS3 & KS4

Distributivity pervades more of the mathematics in KS3 and KS4 than I initially realised early in my career. Have our students heard of it? If they did would it benefit them? In this session we will take a look at when students may first be exposed to the distributive property and then where it can be highlighted moving forwards. We will encounter key examples and non-examples as well as some tasks to get our students (and most likely us) thinking carefully about this incredibly important aspect of mathematics.

[Register your place!](#)

5:30pm - 6:20pm | Introduction to Mathematics DfE Guidance: Progression From KS2 to KS3

This session will take a look at the Mathematics DfE Guidance. The publication aims to 'bring greater coherence to the national curriculum by exposing core concepts in the national curriculum and demonstrating progression from year 1 to year 6' and to 'summarise the most important knowledge and understanding within each year group and important connections between these mathematical topics'. There will be opportunities to explore the guidance and discuss how this could be used to inform your long term planning, medium term planning and aid gap analysis. Within the session, we will also focus on how the document can be used to aid transition from KS2 into KS3.

[Register your place!](#)

Wednesday 2nd December

3:30pm - 4:20pm | 'White Rose Maths Guest Session: Equality and Equivalence and the Journey to Proof'

This workshop explores the related concepts of equality and equivalence in the secondary curriculum. A key feature of the session will be how to use representations to maximise understanding of these ideas, and how questions can be used to emphasise key learning points. We start with the basic concepts of one-step equations and collecting like terms. Then we explore developing the idea of equivalence through expanding brackets, finding unknown coefficients and on to testing conjectures and the idea of formal proof. This will be contrasted with the development of different types of equations and methods of solution, recognising similar structures. Again, the use of representations will be key in both aspects. Finally the workshop reflects upon how this learning journey prepares students for the transition into studying A Level Maths.

[Register your place!](#)

4:30pm - 5:20pm | Challenging Topics at GCSE: Developing Mathematical Thinking

In previous years a 'Mathematical Thinking' Work Group has run, focusing on both KS3 and KS4 with many overlapping ideas. This session will be focusing on different strategies and activities that you can use within your own classroom with any age group and topic.

[Register your place!](#)

5:30pm - 6:20pm | Representations of Division for Understanding from GCSE to A Level

Whatever your understanding of division, there is always something new to learn. In this session we break down some of the misconceptions that students pick up in division, and look at how we could use visual representations to deepen their understanding - all the way up to dividing polynomials at A Level. Share the love. Or group it.

[Register your place!](#)

Want to hear more about our free Work Group opportunities and events that you can take part in?

[Click here to sign up to our mailing list](#)



Thursday 3rd December

3:30pm - 4:20pm | Multiplication and division from KS2 - Setting the Foundation for KS3 Learning

Success in KS3 Maths relies on children being fluent in and having a conceptual understanding of multiplication and division. Secondary Maths teachers often find that they need to "fill gaps" or re-teach these concepts before the children are ready to progress to new learning. In this session, we will look at how multiplication and division may be taught in KS2 and how re-visiting this can support pupils in making connections to new topics.

[Register your place!](#)

3:30pm - 4:20pm | Challenging Topics at GCSE

Every year we run a Work Group that delves into a topic to discover what makes it a "challenging topic" for students. We track misconceptions that might have been picked up along the way to the GCSE exam and what we can do to minimise them from as early on as possible. Join us to discover what makes a challenging topic and take a look at some of the ideas that have been born from the previous years' Work Groups.

[Register your place!](#)

4:30pm - 5:20pm | Teaching for Mastery at KS4

This session will focus on the 5 Big Ideas of Teaching for Mastery; Representation and Structure, Mathematical Thinking, Fluency, Variation and Coherence in the context of lesson design for Foundation classes at KS4, especially year 11s whose GCSEs are just around the corner. We will look at how using the 5 Big Ideas in lessons can help your students understand topics they have struggled with for years and prepare them for their exams, by considering Foundation GCSE through the lens of Teaching for Mastery. There will be opportunities throughout the session for delegates to ask questions and discuss how they can take the principles back into their classroom.

[Register your place!](#)

5:30pm - 6:20pm | What Comes Next? Studying Maths after GCSE

It's great to see students continue their study of mathematics past the obligatory KS4 part of their education. In this session, we will take a look at the options available for students post-16, specifically A Level Mathematics, A Level Further Mathematics and Core Maths. We'll give you take away ideas to use with your classes at GCSE and some tips on how to include some tasters in your own GCSE lessons to encourage more students to take their love of maths onwards and upwards.

[Register your place!](#)

5:30pm - 6:20pm | An Introduction to Variation and Intelligent Practice

"The central idea of teaching with variation is to highlight the essential features of a concept or idea through varying the non-essential features." You may have heard this description before. During this session we are going to explore the meaning behind it through the use of examples. When creating a set of questions, we will consider what connects the questions and what mathematical structures are being highlighted.

[Register your place!](#)

