



Fully funded
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by the STENS

SECONDARY MATHEMATICS



Subject
Training and
Enhancement in
Norfolk and
Suffolk

COURSE TIMETABLE

Secondary Sessions	Delivered by	Wymondham	Farlingaye	Sir Isaac Newton
Effective Mathematics <ul style="list-style-type: none"> Five big ideas that support effective maths teaching in the new curriculum. 	Alison Borthwick/ Rose Keating	Sat 3rd Nov 9.15 – 11.30am	Wed 31st Oct 5.00 – 7.15pm	Thurs 1st Nov 5.00 – 7.15pm
Conceptual Understanding <ul style="list-style-type: none"> To understand the principles and practicalities behind conceptual mathematics in the classroom 	Alison Borthwick/ Rose Keating	Wed 28th Nov 5.00 – 7.15pm	Tues 27th Nov 5.00 – 7.15pm	Thurs 29th Nov 5.00 – 7.15pm
The Number System <ul style="list-style-type: none"> Understanding place value and the properties of numbers. 	Kay Lowdon / Sophie Kardi / Tom Marjoram	Sat 19th Jan 9.15 – 11.30am	Thurs 17th Jan 5.00 – 7.15pm	Tues 15th Jan 5.00 – 7.15pm
Calculation strategies <ul style="list-style-type: none"> Effective addition, subtraction, multiplication and division strategies. 	Charlie Dawson	Wed 6th Feb 5.00 – 7.15pm	Thurs 7th Feb 5.00 – 7.15pm	Tues 12th Feb 5.00 – 7.15pm
Problem solving <ul style="list-style-type: none"> Strategies to enable students to construct and solve mathematical problems. 	Nicola Coe	Sat 9th March 9.15 – 11.30am	Thurs 7th March 5.00 – 7.15pm	Tues 5th March 5.00 – 7.15pm
Proportionality <ul style="list-style-type: none"> Understanding fractions, decimals, percentages, ratio and proportionality. 	Katy Doidge	<div style="text-align: center;"> <h2>Residential</h2> <p>Friday 5th April – Saturday 6th April at Wymondham.</p> <p>For more information email: machinro.staff@wymondhamcollege.org</p> </div>		
Probability <ul style="list-style-type: none"> Effective strategies to teach probability for conceptual understanding. 	Sophie Kardi			
Transformations <ul style="list-style-type: none"> Understanding how geometrical shapes and functions may be transformed. 	Andrew Gemmell			
Geometrical reasoning <ul style="list-style-type: none"> Geometrical problem solving in the new curriculum. 	Craig Stuart			
Algebra and linear equations <ul style="list-style-type: none"> Introducing algebra and working with the unknown in a linear context. 	Charlie Dawson			
Quadratics <ul style="list-style-type: none"> Further algebra and working with the unknown in a quadratic context. 	Charlie Dawson			
Measures <ul style="list-style-type: none"> Understanding perimeter, area and volume and their interconnections. 	Jess Palmer	Sat 18th May 9.15 – 11.30am	Thurs 23rd May 5.00 – 7.15pm	Tues 21st May 5.00 – 7.15pm
Pythagoras and Trigonometry <ul style="list-style-type: none"> Effective strategies to introduce these 9-1 Foundation tier topics. 	Rebecca Spearpoint	Wed 12th June 5.00 – 7.15pm	Thurs 13th June 5.00 – 7.15pm	Tues 4th June 5.00 – 7.15pm

APPLICATION FORM

Please fill out the below registration form either electronically and send via email to:
Mr Rob Machin at Wymondham College: **machinro.staff@wymondhamcollege.org**
Sophie Kardi at Farlingaye High School : **skardi@farlingaye.suffolk.sch.uk**
Tom Marjoram at Sir Isaac Newton Sixth Form: **tommarjoram@inspirationtrust.org**

Or send via post to:

Mr Rob Machin, Wymondham College, Wymondham, Norfolk, NR18 9SZ
Sophie Kardi, Farlingaye High School. Ransom Road, Woodbridge IP12 4JX
Tom Marjoram, Sir Isaac Newton Sixth Form, The Old Fire Station, 30 Bethel Street, Norwich NR2 1NR

Participant's Name:

Date of Birth: Gender (Please Tick): Female: Male:

Email Address:

Telephone Contact Number:

Reason for selecting this course:

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Teacher Reference Number (TRN):

Name and URN of your school:

Are you an NQT? Yes No

Main subject currently taught:

Additional subjects taught:.....

For participants that are teacher returners only please provide NCTL returner number:

.....

Please tick box to indicate that you have read the information on the next page that explains how the DfE will process your personal information

Course Objective

To enhance the mathematical subject knowledge of non specialist maths teachers from KS2/KS3 bridging to KS4 Foundation/Higher bridging, based on the new curriculum.

Golden Threads

- Conceptual Understanding (CPA– Concrete, Pictorial and Abstract)
- Connections between topics
- Fluency, Reasoning and Problem solving
- Misconceptions in maths
- The new GCSE

Session Topics

1. Effective Mathematics Teaching
2. Conceptual understanding and CPA approach
3. Numbers and the number system
4. Calculation strategies – The 4 operations
5. Problem Solving
6. Proportionality
7. Probability
8. Transformations
9. Geometrical Reasoning
10. Algebra and linear equations
11. Quadratic expressions and equations
12. Measures
13. Pythagoras and trigonometry

The resources have been good, not just a handout that is put in a folder never to be looked at again, usually they are a live document which supports what I do in my lessons.

Di, PE teacher

Each session was totally different and was led in a different style with a range of challenging yet exciting resources. These resources were then available at the end of each session to be taken away and used in our own learning environments. Some of these have now become key parts of my classroom.

Shaun Roberts, PE Teacher

The course is brilliantly organised, split up into little bite- sized chunks which make it really manageable. The leaders on the course are fabulous; they are clearly passionate about mathematics and how to teach it well...I was really impressed.

Jo, Science teacher

...clear, engaging step-by-step explanations and examples are a style I have attempted to model, and you can often see it in the student's faces when there is a marriage of synergy between your pedagogy and a student's understanding.

James Allinson, Maths Instructor

...students who were known to experience difficulty in accessing their GCSE Mathematics either met or exceeded their target outcome - which I can attribute to the ideas, techniques and new-found confidence the TSST provided.

Daniel Mullens, Geography teacher

I saw a dramatic change in the pupils I taught. Some of them even told me maths was now their favourite subject and that is because they were finally enjoying it!

Amy, Science teacher

The Accreditation Folder

At the beginning of the course each participant will be issued with a folder and it will be their responsibility to complete all sections of the folder over the duration of the course.

- **Reflective Diary** – Observations and evaluation from lessons, conversations with pupils other teachers, observations, dept meetings, other CPD, reporting or exam marking. The reflective diary should be reviewed at some point during the course to reflect on pedagogical progress.
- **Take-away Tasks** – Little mathematical tasks based on misconceptions will be given at the end of the session to try out in class with direction of the questions to answer yourself.
- **Observation Feedback** – Keep copies of any formal and informal observations you have received or given.
- **Mentor/Department Meetings** – Include minutes from meetings with your mentor and/or department.
- **Student Voice** – At the beginning and the end of the course take feedback from your students on the content and style of your delivery of maths.
- **Pen Pic** – At the end of the course write a short A4 sized pen pic explaining your personal maths and teaching journey throughout the course.
- **GCSE Exam Paper** – Evaluate subject knowledge at start and end of the course.

Those that complete at least 70% attendance and can evidence within their folder the 7 key criteria and tasks above will receive their accreditation certificate.

All materials used by the trainers throughout the course will be available online to all participants.

For the **residential weekender** a more detailed schedule will be issued nearer the time.



Participant management information and Data Protection

The following data items are required for each applicant/participant:

1. Participant name, DOB, gender, contact details and reason for selecting this course.
2. Teacher Reference Number (TRN) – accurate provision of this is crucial as will allow us to link other datasets in-house. Where a participant does not have a TRN (e.g. they are a teacher without QTS working in an Academy or a Free School) please indicate why.
3. Name and URN of the school the teacher is based in.
4. Main subject currently taught.
5. Additional subjects taught.
6. For participants that are teacher returners only please provide NCTL returner number.
7. Please indicate that you have read the information below that explains how the DfE will process your personal information.

The Data Protection Act 1998 (DPA)

Privacy notice: Information for applicants / participants

How will we use your information?

The training you are applying for is part-funded by the Department for Education (DfE). DfE intends to evaluate the course and the potential benefits to those who participate in it as well as the wider education sector. To enable them to do this, we will provide the minimum information necessary to them to carry out their evaluation.

DfE (or a contracted organisation working on its behalf) may also:

- Contact you to ask about your experiences of the training. Please note that, if contacted, you will be under no obligation to take part. If you do, you will not be identified in any results of the evaluation and you can ask not to participate, or change your mind, at any time.
- Link information you provide in your application form with other information about you which DfE already holds or to which it is lawfully permitted access. This is to identify (for example) what kinds of qualifications participants to this training go on to achieve, and how long they stay in teaching, without having to contact you repeatedly to ask you to update your information.

Security and confidentiality

DfE's use of the information we share with them (or its contracted partner) will have no influence on the outcome of your application or your participation in the training and DfE's findings will not identify you or any other applicants/participants.

Any personal data shared with DfE will be handled securely and only accessed for the purposes of the evaluation of the science, technology, engineering and maths (STEM) package. Once it is no longer needed for this purpose, information we have shared with DfE will be securely destroyed.

You can find more information about DfE at www.gov.uk/dfe.

If you have any questions about how DfE will use your information, please contact STEM.
evaluation@education.gsi.gov.uk Privacy notice: Information for inclusion in your privacy notice for applicants / participants.

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