

#mathscpdchat 19 July 2022

Looking back over your maths teaching in 2021/22, and forward to 2022/23, what is important to you?

Hosted by **Charlotte Hawthorne**

This is a summary of the discussion – to see all the tweets, follow the hashtag **#mathscpdchat** in Twitter



The links shared during this discussion were:

<u>Barbie Bungee</u> which is a pdf file from the US National Council of Teachers of Mathematics (NCTM). This illustrated four-page document is presented as task instructions, addressed to students, describing how to conduct an experiment to test their own conjectures. It includes detailed guidance about recording and analysing results. It was shared by <u>Dani Quinn</u>



<u>Linear Sequences - Structured Variation Grid</u> which is an interactive grid from mathsbot.com, created by <u>Jonathan Hall</u>. Cells of the grid 'contain' nth term expressions of sequences of the form An + B (which expressions the user can choose to display or hide), and also four or five consecutive terms from anywhere in the sequence (which the user can also choose to display or hide). The sequences are arranged systematically across the two-way grid of cells, which can be seen/explored/extended in either direction. It was shared by <u>Jonathan Hall</u>

<u>Mathematics Trivia</u> which is a collection from <u>Transum</u> of 'sixty interesting facts about Mathematics that will surprise, entertain and educate you'. For example, did you know that the billionth digit of Pi is 9, that a polygon with 1,000,000 sides is a 'megagon', that the number 2 is the only prime number that doesn't have the letter 'e' in its name, that King's Cross station has a platform zero, that the volume of a deep-pan pizza with radius Z and depth A is Pi × Z ×Z ×A, and so on ...? It was shared by <u>Transum</u>

Ratio Questions by scaling - backwards fading which is free-to-download editable teaching material designed by Karen Hancock. It was shared by Karen Hancock

<u>WEBMATHS</u> which is a website containing links to maths resources, collected into (presently twentyone) categories such as Virtual Textbook Algebra, 2022 Exam Resources, Useful maths websites, Artful Maths, Form time Activities, Education News, and Careers Using Maths. It was shared by webmathscouk

<u>Focus on...change ringing</u> which is an illustrated article in the archived NCETM Secondary Magazine 70. It provides ideas about how change ringing may be used to support some mathematics learning. It was shared by <u>Mary Pardoe</u>

A full illustrated summary of the discussions in this #mathsCPDchat follows.



The (linked-to-Twitter) screenshots below show the one long conversation, and two other tweets, that were generated by the host's first question. Teachers shared and discussed strategies and tasks that they use occasionally when they decide that, owing to unforeseen circumstances, students will benefit from experiencing a 'different' kind of maths lesson. In the following part of the summary only, you can click on any screenshot-of-a-tweet to go to that actual tweet on Twitter. The following tweets, represented by screenshots linked to Twitter, were in response to this question from Charlotte Hawthorne:



Charlotte Hawthorne @mrshawthorne7 · 17h Welcome to tonight's #mathsCPDchat

Let's kick things off with a reflection on this week...

How have you been coping in the heat? Any great activities, maths or otherwise that you've tried in the last few days?

Don't forget to include the #mathsCPDchat in your replies! In this long conversation, initiated by <u>Dani Quinn</u>, and including <u>Charlotte Hawthorne</u>, <u>Mary Pardoe</u>

and webmathscouk, teachers discussed ways in which they may interpret 'curriculum' and 'scheme of work (SOW)' differently ...



Dani Quinn @danicquinn · 17h Replying to @mrshawthorne7

It made me realise we have far more days where, at the last minute, it becomes clear that you shouldn't continue with the curriculum or give important feedback, as so many are unexpectedly absent. Whether weather or illnesses, we need to be ready with last-minute alternatives



Charlotte Hawthorne @mrshawthorne7 · 17h

#mathsCPDchat an important point. Anyone else make any last minute changes? I'm normally the one teaching curriculum up until the last lesson of the last day but even I had to cave in this week. Anyone else?



Dani Quinn @danicquinn - 17h

Replying to @mrshawthorne7

A tricky element is organising it so that the kids don't get the same off-SOW experience multiple times (eg binary is awesome, as is exploring curves of pursuit or the four-colour theorem, but nightmare if they did it 3 months ago). Takes a lot of coordination! #mathscpdchat



Mary Pardoe @PardoeMary · 17h Do you have a store/bank of 'off-SOW' tasks/ideas? #mathscpdchat

...





Dani Quinn @danicquinn · 17h

It's made me want to develop one! It would ideally have quick intros for those unfamiliar, and key points for classroom management where they differ from typical lesson structure. It would be lovely to use staff CPD time on them but I think that is unrealistic #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 · 17h

Replying to @danicquinn and @PardoeMary

This is such a good idea. Any activities that would definitely make it into your collection? #mathsCPDchat



Dani Quinn @danicquinn · 17h

I'd probably organise with tags such as low-energy / low-management / low-input / high-energy / high-input / relaxing / exciting so that people could select what suits the circumstance (eg today was definitely one for the low energy / relaxing category!). #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 · 17h

Replying to @danicquinn and @PardoeMary

Really like the low/high energy idea! Sometimes you need to know what you're letting yourself in for #mathscpdchat



Dani Quinn @danicquinn · 17h

Ones that spring to mind without opening up my laptop are...

4-colour theorem

Curves of pursuit

Unfamiliar/offbeat constructions

Probability experiments

Generating Pythagorean triples

Volume/SA investigation with open cuboids from a fixed sheet

Barbie bungee 😊

#mathscpdchat



webmathscouk @Dids31 · 17h

Pythagoras Forts problem leading to spreadsheet use

Outdoor loci

Probability games - fair or unfair?

#mathscpdchat

...





Mary Pardoe @PardoeMary · 17h

Replying to @mrshawthorne7 and @danicquinn

Borrow some handbells from Music dept, then do some change-ringing ... students love it on my experience!

There is an article here (I think ... will find proper link later)

ncetm.org.uk/resources/27952 #mathscpdchat



Mary Pardoe @PardoeMary - 17h

Replying to @PardoeMary @mrshawthorne7 and @danicquinn #mathsccpdchat

I will find the proper link!

Focus on...change ringing

Bell ringing is a context in which students can explore connected mathematical ideas such as the concepts of order, change and system. They can make and test hypotheses, and generalise. And there are opportunities for cross-curricular links with music and physics.

Change ringing is a team activity in which bells are rung one after another rhythmically according to patterns that the ringers memorise. It originated in England around the end of the sixteenth century as a way of ringing church bells that was compatible with the design and construction of sets of bells in church towers, and that fulfilled particular social functions.



This traditional activity has survived – as this school student explains (if you use this video in a lesson you can decide whether or not to show your particular students the last part – When it went wrong).

Change ringing is also done on hand bells, either by church bell-ringers when practising,



(link provided above)



Dani Quinn @danicquinn · 17h

Definitely not one for the "low energy" or "relaxing" options 😂







Mary Pardoe @PardoeMary · 17h

How are these 'off-SOW'?!!!

#mathscpdchat

Aren't they nice tasks/things-to-do in 'normal' maths lessons?



Charlotte Hawthorne @mrshawthorne7 · 17h

Maybe if we had more time \(\begin{align*}
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Dani Quinn @danicquinn · 17h

Exactly. Hence distinguishing between the SOW (I hate the phrase nonnegotiable, so perhaps better framed as "agreed minimum offer for all groups") and the curriculum (where appropriate, the extra depth or texture that a teacher might plan in). #mathscpdchat



Vicky Osborne @CheerVix · 17h

Replying to @danicquinn @mrshawthorne7 and @PardoeMary

Curves of pursuit were everywhere today in our secondary's maths dept 😍



Charlotte Hawthorne @mrshawthorne7 · 17h Same!



Charlotte Hawthorne @mrshawthorne7 · 17h

Replying to @danicquinn and @PardoeMary

I think I need to know more about Barbie bungee ##mathsCPDchat



Dani Quinn @danicquinn · 17h

I think @fawnpnguyen or one of her US maths pals first wrote about it (sorry I can't remember who). I developed it from here to do after linear graphs (with cheap barbie knock offs), although now I would save it for a low-attendance, high-energy lesson illuminations.nctm.org/uploadedfiles/...

(link provided above)



Mary Pardoe @PardoeMary · 17h

Not totally 'off-SOW' though?! #mathscpdchat

But is anything that's maths-related?



Dani Quinn @danicquinn · 17h

I had originally thought "off curriculum" and changed to "off SOW". I see the SOW as the mechanism/journey to deliver the priorities of the curriculum. Barbie bungee is great fun but not a priority for delivering that part of the curriculum (IMO). #mathscpdchat





webmathscouk @Dids31 · 17h

Time to fit everything in is sometime a deciding factor. Not "off-SOW", but sometime a nice to do if possible.#mathscpdchat



Mary Pardoe @PardoeMary · 17h

Sometimes some/many/all students learn more when you take a risk timewise by moving away for a bit from the 'norma/usual/must-do' tasks? #mathscpdchat



Mary Pardoe @PardoeMary · 1h

I received this interesting writing from Peter Lacey, @ecarda1, after the #mathscpdchat had ended last night ...

Schemes of Work

If the mathematics curriculum is the territory to be explored, then a scheme of work is a journey planner, stopping off at particular locations on the territory and learning about them, as well as taking and appreciating the roads that connect them.

I can do something like this with my car Sat Nav. I put in a destination and stopping off points, and, hey presto, the journey is planned. It is pre-set. I undertake the journey as planned.

My friend has a different journey planner app called "Waze". She puts in the destination and stopping off places. What makes this so clever is that, whilst on the journey, real time information is used to make modifications to the journey: an interesting event at a location, or an accident to avoid, or an alternative route between locations. Fellow travellers can put this information onto the platform.

I think my scheme of work journey planner should be like "Waze", so that it can be tweaked *en route* to match the needs and interests of my learners. And also giving them a say in our navigation.

... and Charlotte's first question prompted two more contributions from webmathscouk:





webmathscouk @Dids31 · 17h

Replying to @mrshawthorne7

Just finished Day 2 or 4 days Artful Maths enrichment. Resources from webmathscouk.wordpress.com Lots of links on the artful.matgs tab. #mathscpdchat



webmathscouk.wordpress.com Home A page of maths resources

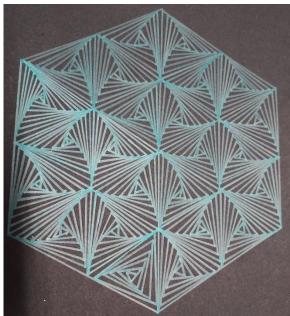


webmathscouk @Dids31 · 17h #mathsconf29 #mathsart













Charlotte's second question ...



Charlotte Hawthorne @mrshawthorne7 · 18h Here's the one you've been waiting for...

How has your mathematics teaching gone this year?

Tell me a highlight

Have you changed something about your practice that has gone well this year?

#mathsCPDchat

... prompted discussions on seven themes and two single replies. It generated this positive conversation ...



Vicky Osborne @CheerVix · 18h

Replying to @mrshawthorne7

I had the same year 8 class as last year. They were hard work last year and I felt a little dismayed getting the same set again. But together we smashed it and I'm so proud of them!



Charlotte Hawthorne @mrshawthorne7 · 20h

Assuming MOST people have their timetables for next year now (surely?!) So...this is a nice reminder that even if you have some classes you aren't overjoyed with they can be much better than you expect:) #mathscpdchat (I know it's after hours but ah well 😅)



Anthony Shaw @ShawMaths · 20h

Replying to @mrshawthorne7

It's what I tell my team when they get a class they're not overjoyed by!

It's a cliche but the most challenging classes and pupils are often the most rewarding (and the most fun!).

#mathscpdchat

... and this ...



webmathscouk @Dids31 - 19h

Replying to @mrshawthorne7

Back to full time math teaching after many years on SLT and teaching Y7/8 for the first time in a long time. Lots of use of mini whiteboards with diagnostic questions and I do/ you do scaffolding. Finding opportunities for enrichment for students. #mathscpdchat





Charlotte Hawthorne @mrshawthorne7 · 19h

How have you found the change? Did anything surprise you? Will you miss anything about being part of SLT? #mathsCPDchat



webmathscouk @Dids31 · 19h

Change needed to create space to look after elderly mum. Not really surprised how much I loved teaching maths full time again, but I had forgotten this. Miss the challenge of leadership sometimes, but time with mum is precious. #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 · 19h

That's so important! I love being in the classroom too! #mathsCPDchat

... this chat in which 'Mathsfeasts' were mentioned ...



Mr C @chawnerwarner · 19h

Replying to @mrshawthorne7

taking children from my school to a Mathsfeast in a very grand school setting

stopped worrying about fitting everything but the kitchen sink into my lessons



Mary Pardoe @PardoeMary · 19h

Can you describe the Mathsfeast briefly? #mathscpdchat



Mr C @chawnerwarner · 19h

A comp where schools take up to 2 teams of 4. There are then different individual rounds that get children to think mathematically without giving them typical maths questions. Example this year was where they had to use reasoning with minimal info to match heights to buildings



Charlotte Hawthorne @mrshawthorne7 · 19h

Replying to @chawnerwarner

I love a maths feast!

Love that you've stopped worrying about that. Was there anything you can pinpoint that made you worry about it less? Do you have a structure that you have to stick to when creating and delivering lessons?

#mathsCPDchat



Mr C @chawnerwarner · 19h

Just realising that children take longer to do bigger tasks than you realise!

My structure is now breaking concepts down into much smaller chunks and then giving children smaller periods of practice on each resulting in (hopefully) less overload at once. #mathscpdchat



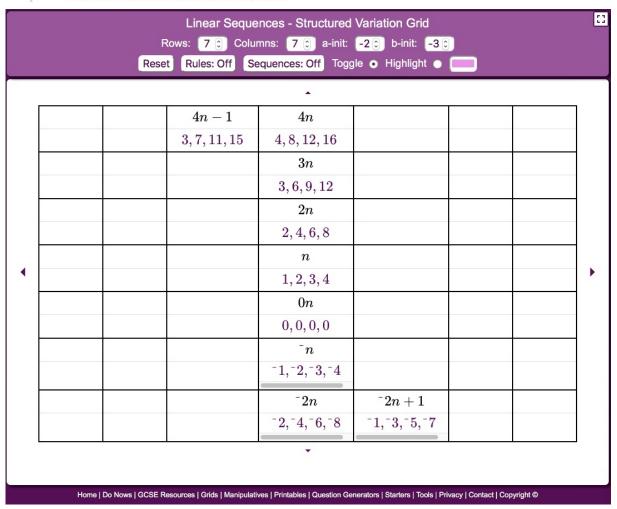
... this reminder ...



Jonathan Hall @StudyMaths - 16h

Replying to @mrshawthorne7

Have I ever mentioned Structured Variation Grids to you? mathsbot.com/grids/linearSe...





Charlotte Hawthorne @mrshawthorne7 · 8h

🛂 maybe once or twice...

... this chat about making booklets ...



Karen @karenshancock · 19h

Replying to @mrshawthorne7

Booklets - but most importantly the option this gives to build in extension work so that I can ensure everyone does sufficient of a task.

Ss know to go on the extension tasks and not just the next page.

Front page of booklet lists the page numbers for extensions.

#mathscpdchat

...





Charlotte Hawthorne @mrshawthorne7 · 19h

Tell us more please, Karen. Especially those that didn't get to hear you talk about them at the teachingTogetherLeeds meet. How long do they take to create? Where does inspiration come from for your tasks? Practical tips for those wanting to try this approach? #mathsCPDchat



Karen @karenshancock - 18h

Usual process is start with something like this:

And then decide which need examples (worked in advance with self explanation prompts or worked live)

And decide on tasks - using all sorts, Corbett, Don Steward, Interwoven etc and other resources I've been using for years.



Ø	Form & solve in context
②	CT:S -> link to turning points Solve by C.T.S.
3	Solve by C.T.S.
(4)	Quadratic formula



Karen @karenshancock · 19h

I edit it all together in Ppt - and then use a pdf editor to add page numbers.

Usually I get 4 - 8 lessons from a pack. I aim for one per topic.

Extension activities often from Don Steward or Open Middle or

Nrich.#mathscpdchat



Karen @karenshancock · 18h

Replying to @mrshawthorne7

Practical tips: Definitely include page numbers - this is vital.

Add any answer pages to the Ppt and hide them or create a different section name so they don't print.

Often a landscape page is a better option.

#mathscpdchat

... this conversation about corrections and coloured pens ...





Cat @CMaths3 · 18h

Replying to @mrshawthorne7

Do nows. Explaining much better why we do them. Check every students book. No opt out (if they don't know an answer they must copy the question). Green pen work modelled on visualiser. Corrections check by teacher walking round. Much better retrieval #mathsCPDchat



Charlotte Hawthorne @mrshawthorne7 · 18h

Sounds great. What advice would you give to someone who wanted to make the start of their lesson more like this? Either as a department or just for their own classroom? #mathsCPDchat



Cat @CMaths3 · 18h

Replying to @mrshawthorne7

Model green pen work in an exercise book on a visualiser. Students don't get what corrections should look like unless you are v clear. Also, no opt out. Usually students don't copy the qs. But if they say they don't know then they have to. This makes not trying more effort.



Anne White @ALWhite09 · 18h

Replying to @CMaths3 and @mrshawthorne7

Is there a way I can remind myself to do this in Sept using Twitter. Great idea



Charlotte Hawthorne @mrshawthorne7 · 18h

What is green pen work? (Sorry if I've missed this \(\begin{align*}
\text{\text{\text{w}}}\) Is it what you call it when you go through the work and they need to correct it? I think it's what I would call purple pen work if so but want to make sure I understand.

#mathsCPDchat



Cat @CMaths3 · 18h

Yes we do our corrections in green pen



Karen @karenshancock · 18h

I would say - Do Nows don't need to look pretty - Mine are handwritten mainly, with Mathsbot or MathsWhiteboard website if I haven't had time to handwrite it. #mathscpdchat

... and this discussion about some resources for A level teaching:



Dr Anna @Dr_anna_maths · 19h

Replying to @mrshawthorne7

I am excited to be teaching A-level again for next year. Need to brush up my Further Maths over the summer #mathscpdchat





webmathscouk @Dids31 · 18h

I am using the ODPD resources to work through some A Level content to refresh and reinvigorate my A level teaching. Pretty sure they have FM ODPD courses as well.#mathscpdchat



Dr Anna @Dr_anna_maths · 18h

Ooh, thank you. I have used those before but had forgotten about them, good tip! #mathscpdchat



TM @tm maths · 20h

Replying to @Dr_anna_maths and @mrshawthorne7

I recommend following @Whitehughes for questions, @TLMaths playlist, I've got past paper written solutions for Edexcel which I'd be happy to DM.



Dr Anna @Dr_anna_maths · 19h

Thank you, that would be brilliant! I have taught lots of it on OCR, and on OCR MEI, but not Edexcel and not since the spec changes so I'm out of date! #mathscpdchat

Finally, there were two 'single' replies to Question 2 (which is shown again as a reminder):



Charlotte Hawthorne @mrshawthorne7 · 18h Here's the one you've been waiting for...

How has your mathematics teaching gone this year?

Tell me a highlight

Whave you changed something about your practice that has gone well this year?

#mathsCPDchat



MrTaylorMaths @MrTaylorMaths2 · 18h

Replying to @mrshawthorne7

Use of language 'additive inverse', 'commutativity', 'decomposition', 'partitioning'

Extra emphasis on vocab, particularly into Latin and Greek roots and related words. 'Perimeter' = peri+meter = around+measure 'Peri' like periscope, perinatal, or period.

#mathsCPDchat

...





Vicky Osborne @CheerVix · 20h

Replying to @mrshawthorne7

Definitely running a full day of mastery training with the advocates in all the secondary programmes together. The amount of thinking and collaboration we had to do to make that work taught me a lot. Feel very lucky to be in such a great team! #mathscpdchat

Charlotte's next question ...



Charlotte Hawthorne @mrshawthorne7 · 19h

Has anything surprised you this year in your maths teaching? Maybe you discovered the 1089 'trick' for the first time...maybe you realised that something works that you never thought would...maybe it's something else. I'd love to hear.

#mathsCPDchat



... prompted the following example of an unexpected outcome (link provided above) ...



Karen @karenshancock · 19h

Replying to @mrshawthorne7

Ratio scaling. I was really anti this method - I much prefer algebra myself, but @nathanday314 was very passionate about it, so I figured I should try to get my head round it. Gamechanger! #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 · 19h

Do tell us more...with examples if possible:) #mathsCPDchat

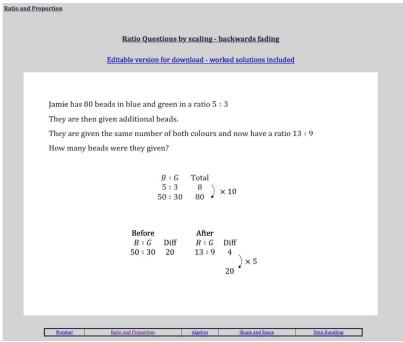


Karen @karenshancock · 19h

Would this do: :-)

kshancock.co.uk/lessonresource... #mathscpdchat





...and many people have this year been surprised by a wide variety of facts ... which you may or may not know!



Dr Anna @Dr_anna_maths · 19h

Replying to @mrshawthorne7

It's trivial, but today I learnt that the name of every odd number contains the letter 'e' #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 · 19h

Nothing too trivial, I quite like this one. I also like knowing the number, when written in words in English, which has its letters in alphabetical order. Anyone else got any nice little bits of maths trivia? #mathsCPDchat



Dr Anna @Dr anna maths · 19h

Replying to @mrshawthorne7

I think transum calls that alphanumbetical, but I suspect that's not a real word! #mathscpdchat





Transum @Transum · 9h

Yes I made it up I'm afraid - though I guess all words were made up by someone! Anyway here is my collection of Maths Trivia



transum.org Mathematics Trivia 77 interesting facts about Mathematics that will surprise, entertain and educate you.

(link provided above)



Alan Wood 3.5% I @alwoodswork · 9h

Replying to @mrshawthorne7

Algorithms and logarithms are anagrams of each other and two of the longest words in the English language without repeating letters.



Alan Wood 3.5% 💙 @alwoodswork · 9h

Replying to @mrshawthorne7

One + twelve = two + eleven (anagrams)



Ben Paddon @nebnoddap · 19h

Replying to @mrshawthorne7

No written number from zero to one hundred contains the letter a



Ben Paddon @nebnoddap · 19h

Replying to @mrshawthorne7

Another is that if you had a piece of rope around the circumference of the earth, and you wanted it to hover one foot away from the earth, you'd only need to extend the rope by 6.28 feet.

Same for a piece of rope wrapped around the circumference of the moon, or tennis ball.



Chris White @onechriswhite · 16h

Replying to @mrshawthorne7

Between 113 and 127 there are 13 consecutive non-primes.





Ben Paddon @nebnoddap · 18h

Replying to @mrshawthorne7

Forgot the palindromic products of 1s as well!

le. 1x1=1 11x11=121 111x111=12321

Works all the way up to 111,111,111x111,111=12345678987654321



audioUprising @audioUprising · 6h

Replying to @mrshawthorne7

I marked A-level this year. I found a lite of students wrote LATE on their int by parts Q. Turns out it's a great way to remember what should be U and what should be V'

Charlotte tweeted her fourth question ...



Charlotte Hawthorne @mrshawthorne7 - 20h

Half-way point...let's change the focus to next year.

What do you want to change next year? (Or do better)

AND... what advice would you give to an ECT?

Kind of like an academic new-years resolution.

#mathsCPDchat



... halfway through the hour of the chat, but, because most contributors were still responding to questions already asked, only the following resolutions and advisory thoughts were shared:



...



webmathscouk @Dids31 · 20h

Replying to @mrshawthorne7

Build/gather more challenge activities/resources to share. Really pleased with new website of free resources, continue to add to this. Advice - don't beat yourself up, don't try to reinvent the wheel, keep it simple, ask for help, use mini whiteboards every day. #mathscpdchat



Karen @karenshancock · 20h

Replying to @mrshawthorne7

I want to focus on the A Level tasks that I use - I'm teaching the side of the FM course I've not taught for many years, so I want to resource it to my liking.

#mathscpdchat



Karen @karenshancock · 20h

Replying to @mrshawthorne7

My advice to an ECT would be make sure you are ahead of the students in terms of working through questions (before the lesson or worst case during the lesson) - you want to be able to say "Don't do Q5" before it derails your lesson. #mathscpdchat



Jay Timotheus @jaytimotheus · 20h

Replying to @mrshawthorne7

Advice for an ECT... Join a professional association, e.g. @ATMMathematics. Read, and keep reading other maths teachers' and maths ed. researchers' perspectives.

The host's last question ...



Charlotte Hawthorne @mrshawthorne7 · 20h

I'm going to squeeze in one more question which I hope people will continue to add to after the hour's up (time has ran away with me tonight!)

What's the best CPD you've done this year? 🌟

Any CPD plans for over the summer? (e.g. book recommendations?) 🌞 🔚

#mathsCPDchat

... generated articulation of the fact that usually an outcome for the teacher of teaching, and preparing to teach, is learning oneself ...







Karen @karenshancock · 20h

Replying to @mrshawthorne7

For me the best CPD I've done is planning CPD to deliver to others, it makes me stop and think clearly about why I'm doing what I'm doing and refine it.

#mathscpdchat



Vicky Osborne @CheerVix · 19h

Replying to @mrshawthorne7

Definitely running a full day of mastery training with the advocates in all the secondary programmes together. The amount of thinking and collaboration we had to do to make that work taught me a lot. Feel very lucky to be in such a great team! #mathscpdchat



Alex ~ Vic Maths Notes @VMN alex · 15h

Replying to @karenshancock and @mrshawthorne7

Same thing I get from writing all my notes for vicmathsnotes.weebly.com Forces me to make what's in my head more concrete #mathscpdchat



Charlotte Hawthorne @mrshawthorne7 - 20h

This is so true! I've had many opportunities to do the same this year including my @NCETM PD lead accreditation (which I got told I passed today 5%)

And through presenting at maths conferences too. It really helps you to focus in on what made the difference! #mathsCPDchat



webmathscouk @Dids31 · 20h

Congratulations.

... which, of course, may also be a result of interacting with ideas and tasks from other teachers:



webmathscouk @Dids31 · 20h

Replying to @mrshawthorne7

Linked a lot of free CPD ideas on here as well. webmathscouk.wordpress.com/teaching-and-l... #mathscpdchat

webmathscouk.wordpress.com

Teaching and Learning

Complete Maths CPD Shorts EEF Geogebra Training Booklet (@Mr_Rowlandson) Innerdrive Jamie Clark...

(link provided above)





webmathscouk @Dids31 · 20h

Replying to @mrshawthorne7

MathsConf#29. First maths CPD I have managed to get to in a long time after my move from SLT to teaching maths full time. Also ODPD from AMSP. #mathscpdchat



Mr Day @MrDayMaths · 10h

Replying to @mrshawthorne7

@pgliljedahl book - Building Thinking Classrooms in Mathematics



Mr Bishop @MrBishop_Maths · 19h

Replying to @mrshawthorne7

Either the maths hub HOD working group or the complete maths conference/head of maths conference. Been really good for me this year as a new Hod he #mathsCPDchat

The host ended this chat with:



Charlotte Hawthorne @mrshawthorne7 · 20h

Wow! That hour flew by!

Thank you SO MUCH for all of your wonderful contributions to #mathsCPDchat this evening, and all year! That's it for the summer now so have a wonderful break everyone!

Please feel free to continue threads, I've loved hearing all of your reflections!



