

## #mathscpdchat 7 December 2021

**Planning for students' learning together as a team: how do you do it?**

Hosted by [Alice Ward-Gow](#)

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



The graphic features a large teal hashtag symbol on the left. The text '#mathscpdchat' is written in white on a teal background. To the right, it says 'Today Tuesday, 7 December, 7-8pm'. In the center is a photograph of a woman in a light blue shirt speaking to a group of people seated around a table. Below the photo, the text reads 'Planning for students' learning together as a team: how do you do it?'. At the bottom, it says 'Hosted by Alice Ward-Gow @mcwardgow' and 'ncetm.org.uk/mathscpdchat'. The NCETM logo is in the bottom right corner.

The links shared during this discussion were:

[An effective model for collaborative planning in maths](#) which is an NCETM article showing how, at Southfields Academy in Wandsworth, collaborative planning sessions have led to improved lesson quality, reduced planning time, and better staff retention. It was shared by [Mary Pardoe](#)

[Teacher collaboration supports mixed-attainment classes](#) which is an NCETM case study about how a London school models one possible way to move to effective mixed-attainment teaching in Years 7 and 8. It was shared by [Mary Pardoe](#)

[A practical way to improve lesson planning in secondary school maths teaching?](#) which is an article from the NCETM's Director, Charlie Stripp. It was shared by [Mary Pardoe](#)

[10 ticks](#) which is a website providing school maths worksheets and other resources for maths teachers and tutors. It was shared by [Helen Scott](#)

The replies to the host's first tweet ...



**Miss Ward-Gow** @mcwardgow · 18h

...

Welcome to tonight's [#mathscpdchat](#) on all things relating to collaboration 😊 when you reply to the posts, please don't forget the hashtag 👍

Let's kick things off with a question... how has this half-term been for you?  
GIF replies only 😎 [#mathscpdchat](#)

... contained these GIFs (click on any of the nine images to see that GIF 'in action' full size, and to find out who tweeted it):



Alice's first question ...



**Miss Ward-Gow** @mcwardgow · 18h

...

Q1. When you first starting teaching/training to teach did you largely plan all your lessons from scratch? 🤔 #mathscpdchat

... revealed that, when first starting teaching, most maths teachers planned their lessons on their own 'from scratch', but sometimes drawing on published material such as textbooks or website resources. Teachers discussed memories of their first few years.

For example ...



**Catherine Edwards** @Edwards08C · 18h

...

Replying to @mcwardgow

Mostly, although we did have a CD of whiteboard maths



**Miss Ward-Gow** @mcwardgow · 19h

...

Replying to @Edwards08C

Is that the set of Whiteboard maths powerpoints? #mathscpdchat



**Catherine Edwards** @Edwards08C · 18h

...

Yes, I have distinct memories of the probability ones #mathscpdchat



**Helen Scott** @HelenScott88 · 18h

...

I remember this too 🏠 the sounds!!



**Catherine Edwards** @Edwards08C · 17h

...

It still exists! [whiteboardmaths.com/product\\_129.ht...](http://whiteboardmaths.com/product_129.ht...)



**Catherine Edwards** @Edwards08C · 20h

...

But in 2004 it was superduper innovative #mathscpdchat

... and, as the discussion continued, the conversation touched on present practice ...



**Helen Scott** @HelenScott88 · 20h

...

Replying to @Edwards08C and @mcwardgow

10 ticks too anyone? Some of those questions are wonderfully sequenced. #mathscpdchat



**Helen Scott** @HelenScott88 · 19h

...

They are very good for lots of practice of a particular skill, especially the number and algebra bits. Loved the index being on excel then finding the right sheet/level. Love a good calculated colouring too! #mathscpdchat



**Catherine Edwards** @Edwards08C · 19h

...

Still use them occasionally, although mostly excerpts in my booklets now. #mathscpdchat

 **Sharon Malley** @mathsmumof2 · 19h ...  
I used the 'Some Products' sheer today as an introduction to factorising quadratics #mathscpdchat


 **Catherine Edwards** @Edwards08C · 19h ...  
Always use that one, infact I have it planned for next week 😊  
#mathscpdchat

... and on physical resources teachers used in their early teaching years:

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Q1. When you first starting teaching/training to teach did you largely plan all your lessons from scratch? 🤔 #mathscpdchat

 **Catherine Edwards** @Edwards08C · 20h ...  
Replying to @HelenScott88 and @mcwardgow  
Yes , on the single departmental computer we all shared 🤖  
#mathsCPDchat


 **Miss Ward-Gow** @mcwardgow · 20h ...  
One computer?! 🤖 #mathscpdchat


 **Catherine Edwards** @Edwards08C · 20h ...  
My first classroom had a roller whiteboard and an OHP. Did a paper register too. Although I had worked as an maths cover in a school with one active board in the dept. Most of the time we shared the office computer. Or photocopied from the master ring binder #mathscpdchat

 **Miss Ward-Gow** @mcwardgow · 20h ...  
Last year when we were having to change classrooms, I loved teaching in a Science classroom with a roller whiteboard 😍 would take one of those over an interactive whiteboard anyday! #mathscpdchat


 **Catherine Edwards** @Edwards08C · 20h ...  
I could have a whole morning of lesson examples prepared on different sections and just roll round to the next class. #mathscpdchat

There was a discussion about how teachers interpret 'from scratch' in 'planning lessons from scratch':

 **Catherine Edwards** @Edwards08C · 18h ...  
Replying to @mcwardgow  
I wonder if there is a date of training split? Also how much do you have to originally produce for it to count as "from scratch"?  
#mathscpdchat.

 **Miss Ward-Gow** @mcwardgow · 18h ...  
You're probably right :-) good question - For me, planning a lesson from scratch would be starting with a blank Notebook file and going from there. What's your interpretation? :) [#mathscpdchat](#)

 **Catherine Edwards** @Edwards08C · 18h ...  
That would be my interpretation too.  
I wouldn't say that if I took a PPT from say variation theory and based my planning on that, that it was from scratch. [#mathscpdchat](#)

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Agreed 😊 [#mathscpdchat](#)


 **Maths with Mr Blake** @MathsMrBlake · 15h ...  
Interesting, I take almost all of my lessons from resource websites, but make edits to them, they're just my starting point as a guide. I would still call that from scratch! I have produced only 2 or 3 lessons purely from my own mind. Who has time for that?!


 **Catherine Edwards** @Edwards08C · 7h ...  
I certainly don't! Nearly everything is an adaptation from something that exists. I only make tasks from scratch when I can't find exactly what I want. But as a trainee I planned a lot of my lessons from scratch. [#mathscpdchat](#)

 **Sam Blatherwick** @blatherwick\_sam · 6h ...  
People download entire lessons? Or is there a conflation of lessons and worksheets here?

 **Maths with Mr Blake** @MathsMrBlake · 6h ...  
I download entire lessons! I've used DrFrost slides on transformations to teach my Y10s almost completely unedited and then used the Corbett maths worksheets, again entirely unedited. As a student teacher, lessons are taking me approx 15-20mins to plan and they're great lessons!

**Teachers mentioned textbooks ...**

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Q1. When you first starting teaching/training to teach did you largely plan all your lessons from scratch? 🤔 [#mathscpdchat](#)

 **Sharon Malley** @mathsmumof2 · 18h ...  
Replying to @mcwardgow  
Yes all of them but we also had textbooks to use [#mathscpdchat](#)

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Do you use textbooks more or less now than you did then? [#mathscpdchat](#)



**Sharon Malley** @mathsmumof2 · 18h

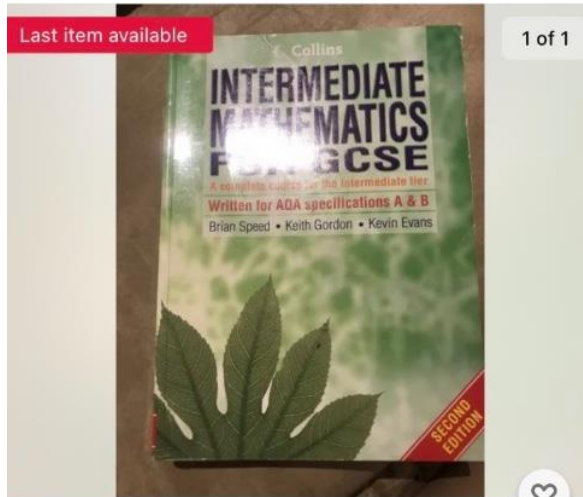
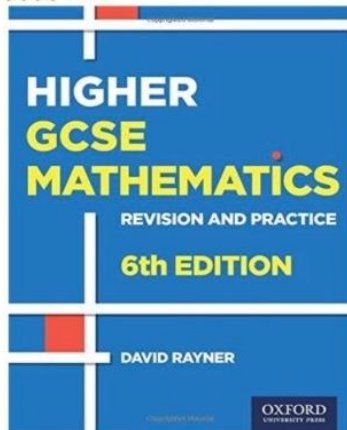
Less as in we don't have any at all 😂 these were particular favourites of mine #mathscpdchat

David Rayner

**Revision and Practice: GCSE Maths: Higher Student Book: With all you need to know for your 2022 assessments**

6th Edition

★★★★★ (80)



Intermediate Mathematics for GCSE by Brian Speed, Kevin Evans, Keith Gordon...



**Dr Ashley Compton** @ashleyeducator · 15h

Replying to @mcwardgow

Early 90s I planned lessons in most subjects from scratch but we had Cambridge maths textbooks so used those as the basis for my maths.



**Maryse #Antiracist** @AllThingsMaths · 20h

Replying to @AllThingsMaths and @mcwardgow

Bostock and Chandler was the A Level one. It's just popped into my head! #mathscpdchat

... and that planning lessons on one's own from scratch is hard work ...



**Miss Ward-Gow** @mcwardgow · 18h

Q1. When you first starting teaching/training to teach did you largely plan all your lessons from scratch? 🤔 #mathscpdchat



**Helen Scott** @HelenScott88 · 18h

Replying to @mcwardgow

Yes, every. Single. One. It does help you really engage with how to model and what you expect students to be doing. However it was laborious! #mathscpdchat




**Miss Ward-Gow** @mcwardgow · 18h

That's a great point - there are benefits to planning lessons independently. Were there any centralised lessons you could use as a starting point? #mathscpdchat

 **Helen Scott** @HelenScott88 · 18h ...  
No, it was 13 years ago though 🙄.  
I like centralised and good question banks. Prefer to use my own structure/model solutions though. #mathscpdchat

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Does your current team have a set of centralised questions? Are there any centralised lessons? :) #mathscpdchat

 **Helen Scott** @HelenScott88 · 18h ...  
Yes we do, we use WRM at ks3 and have adapted some centrally too. We have linked resources for ks4 but no pressure to have to use them #mathscpdchat

... and sharing lesson plans ...

 **Tyke Teacher** @AgentApostrophe · 18h  
Replying to @mcwardgow  
Everything from scratch and still do that now.


 **Miss Ward-Gow** @mcwardgow · 18h ...  
Does your team have a set of centralised lessons that you could use? #mathscpdchat

 **Tyke Teacher** @AgentApostrophe · 18h ...  
Only once I had made them all. They are then tweaked the following year where necessary.

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Do you ever get the opportunity to share your lessons with your team? :-)) #mathscpdchat

 **Tyke Teacher** @AgentApostrophe · 18h ...  
Yes. I have worked in teams which share the load more evenly so the burden is shared. My current team is not like that.

... and teachers discussed collaboration further:

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Q1. When you first starting teaching/training to teach did you largely plan all your lessons from scratch? 🤔 #mathscpdchat

 **Dancing on Jelly** @dancingonjelly · 18h ...  
Replying to @mcwardgow  
Yes. Even though my placement school had perfectly good SoWs. 😊


 **Miss Ward-Gow** @mcwardgow · 18h ...  
Did you have access to other people's lessons? 😊 #mathscpdchat

 **Dancing on Jelly** @dancingonjelly · 18h ...  
Their PowerPoints and things, yes. But using someone else's stuff made writing the plan and doing the reflection too hard 😊

 **Miss Ward-Gow** @mcwardgow · 18h ...  
Do the positives of collaboration outweigh the negatives? 😊  
[#mathscpdchat](#)

 **Dancing on Jelly** @dancingonjelly · 18h ...  
Now I know how to plan and adapt and improvise, certainly. Collaboration is essential to good teaching. But I don't think I could ever just pick up someone else's lesson and teach it without my personal influence.

**One contributor was thinking 'historically':**

 **Etak Airotciv** @etaknipsa · 17h ...  
Replying to @mcwardgow  
Depends on how far back..in early 90s teachers weren't used to planning daily and weekly as they'd worked before the NC and had SoW in their heads .. then we had to do handwritten on A3 weekly and A4 daily .. but also had schemes like Cambridge maths and various comprehension

**Many teachers mentioned the value of planning one's own lessons, particularly during the first years of teaching ... for example ...**

 **Poppy Vowles** @VowlesPoppy · 18h ...  
Replying to @mcwardgow  
Yes and no. To start with it helped me make sure I really knew what I was teaching. Now I merge together slides from our SoL, white rose, go teach maths and others and use resources from various places!

 **Mrs Jenkinson** @AJ\_Teaching · 12h ...  
Replying to @mcwardgow  
Yes, I felt it helped me understand with the flow of the lesson, allowed me to actually understand the progression and gave me lots of opportunities to differentiate!


**... and that they had planned lessons using the National Numeracy Strategy:**

 **Martyn (He/Him)** @martynyeouk · 18h ...  
Replying to @mcwardgow  
Back in the day I used the National Numeracy strategy to plan my lessons!  
[#mathscpdchat](#)


**Alice asked an interesting question (!):**



 **Miss Ward-Gow** @mcwardgow · 20h ...  
Is the OHP making a comeback? 🤔 #mathscpdchat

 **Catherine Edwards** @Edwards08C · 20h  
Replying to @AllThingsMaths and @mcwardgow  
I used a number of Ohp sheets. Particularly for A-level. There was a ring binder with master copies in. #mathsCPDChat

 **Maryse #Antiracist** @AllThingsMaths · 18h ...  
Gosh. Technology and organisation 😊👉  
I loved them for transformations especially. #mathscpdchat

 **Maryse #Antiracist** @AllThingsMaths · 18h ...  
Oooh and linear inequalities. Draw each graph on a separate sheet then overlay. Still love that the best of all. So clear to see what was happening.  
#mathscpdchat

The screenshots below show conversations generated by replies to Alice’s second, third and fourth questions. Teachers discussed creating and using ‘centralised’ lesson plans, planning for learning together, and what may be holding-back such collaborative work. **Click on any of the following screenshots-of-a-tweet to go to that actual tweet on Twitter.**

These first conversations were generated by this question from [Alice Ward-Gow](#):

 **Miss Ward-Gow** @mcwardgow · 20h ...  
Q2. Does your current team have a centralised set of lessons?  
#mathscpdchat

and included this conversation between [Miss Franklin](#) and [Alice Ward-Gow](#):

 **miss franklin** @missfc\_maths · 20h ...  
Replying to @mcwardgow  
We are in the process of building a centralised set of lessons but no obligation to use them and we are free to adapt them as we wish  
#mathscpdchat

 **Miss Ward-Gow** @mcwardgow · 20h ...  
How have the lessons been split? Does each member of the team have a section to do? :- ) #mathscpdchat

 **miss franklin** @missfc\_maths · 20h ...  
Yes each sow has three tiers and a different person is responsible for the exemplars for each tier #mathscpdchat

this from [Sam Blatherwick](#), [Alice Ward-Gow](#) and [Mary Pardoe](#):



**Sam Blatherwick** @blatherwick\_sam · 20h

...

Replying to @mcwardgow

We are building them, slowly. 🙌 #mathscpdchat



**Sam Blatherwick** @blatherwick\_sam · 20h

...

Actually, to be precise, we have centralised elements of lessons, rather than entire lessons #mathscpdchat



**Miss Ward-Gow** @mcwardgow · 20h

...

Does each member of the team plan a certain topic? #mathscpdchat



**Mary Pardoe** @PardoeMary · 20h

...

Some people do! Have you read this: [ncetm.org.uk/features/an-ef...](https://ncetm.org.uk/features/an-ef...) (A school in Wandsworth.) #mathsCPDchat

## AN EFFECTIVE MODEL FOR COLLABORATIVE PLANNING IN MATHS



At Southfields Academy collaborative planning sessions have led to improved lesson quality, reduced planning time, and better staff retention

Weekly meetings focus in detail on the planning of a couple of lessons. A teacher will have put together an initial set of slides that they will show. Colleagues are then invited to improve, add, challenge, question and polish the work done. The result is a lesson co-planned by the whole department, that everyone is happy to use.



**Miss Ward-Gow** @mcwardgow · 21h

...

Bookmarking this to read later 😎 #mathscpdchat



**Sam Blatherwick** @blatherwick\_sam · 20h

...

Replying to @mcwardgow

It's more complicated than that. I think we're finding different members of the team are more skilled at different aspects of task design and as a result it goes down those lines. My challenge as HoF is putting teams together which have complementary strengths #mathscpdchat

this from [Alice Ward-Gow](#), [Maryse](#) and [Helen Scott](#):



**Miss Ward-Gow** @mcwardgow · 20h

...

Q2. Does your current team have a centralised set of lessons? #mathscpdchat



**Maryse #Antiracist** @AllThingsMaths · 20h

...

Replying to @mcwardgow


Yes. @WhiteRoseMaths. But we can adapt as we need.

#mathscpdchat

 **Miss Ward-Gow** @mcwardgow · 20h ...  
That's interesting that you can adapt it... how do you ensure consistency across the team? :) [#mathscpdchat](#)

 **Maryse #Antiracist** @AllThingsMaths · 20h ...  
Replying to @mcwardgow and @WhiteRoseMaths  
The core content and approaches are the same but it's flexible at the moment in terms of amount of practice needed for fluency or maybe post assessment, going back over things. [#mathscpdchat](#)

 **Helen Scott** @HelenScott88 · 20h ...  
Replying to @mcwardgow @AllThingsMaths and @WhiteRoseMaths  
We do this too, diff sets need different scaffolds/challenge. Eg. Our LPA students, WRM goes too quickly and more practise of a skill is needed, whereas HPA students can go at WRM pace. (More nuanced irl but hopefully you get the point). Consistency in methods. [#mathscpdchat](#)

 **Miss Ward-Gow** @mcwardgow · 20h ...  
That makes sense :-)) so the consistency is within the methods and less on the "how long the topic takes to teach" [#mathscpdchat](#)

 **Maryse #Antiracist** @AllThingsMaths · 20h ...  
Yes. Exactly this.

this question and reply from [Alice Ward-Gow](#) and [Martyn Yeo](#):

 **Miss Ward-Gow** @mcwardgow · 20h ...  
Q3. Does your team plan lessons collaboratively? This is not the same as having centralised resources 😊 [#mathscpdchat](#)

 **Martyn (He/Him)** @martynyeouk · 20h ...  
Replying to @mcwardgow  
One person tends to take the lead ive found in primary - we have a lot of subjects to plan!

It is handy to share the load in a team. When I first taught in one form entry I planned everything!

Pros and cons to both, but I do prefer a team!  
[#mathscpdchat](#)

this conversation (also generated by Alice's Q3 above) between [Catherine Edwards](#), [Alice Ward-Gow](#) and [Mary Pardoe](#):

 **Catherine Edwards** @Edwards08C · 20h ...  
Replying to @mcwardgow  
Nope, wish we did though [#mathscpdchat](#)



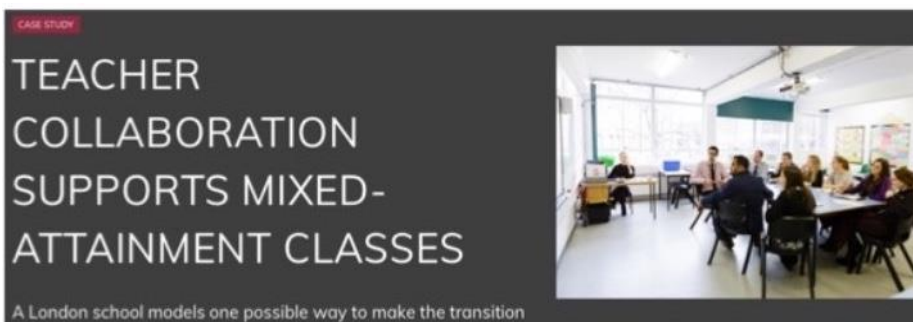
**Miss Ward-Gow** @mcwardgow · 20h ...  
What's the greatest barrier stopping your team from being able to do this? :)  
[#mathscpdchat](#)



**Catherine Edwards** @Edwards08C · 20h ...  
It hasn't been tabled as an option by our HoD. I think a lot of the team would certainly like the opportunity to pick a topic and share ideas and planning even if we didn't go as far as full collaborative planning.  
[#mathscpdchat](#)



**Mary Pardoe** @PardoeMary · 20h ...  
Replying to @Edwards08C and @mcwardgow  
Have you seen this, Catherine?  
[ncetm.org.uk/classroom-reso..](http://ncetm.org.uk/classroom-reso..)  
[#mathsCPDchat](#)



Dan has also arranged for a cover teacher to be regularly timetabled for each year group. This frees staff, in rotation, to spend the period visiting all their colleagues' classes to share good practice.



**Catherine Edwards** @Edwards08C · 20h ...  
I haven't, but I will read. Deep in timetable planning for next year. I'm really keen to see if we could structure the timetable to support faculties to do things like this. [#mathscpdchat](#)

these connected comments from [Dancing on Jelly](#) and [Richard Dare](#):



**Dancing on Jelly** @dancingonjelly · 20h ...  
Replying to @mcwardgow  
One of the best CPD I ever participated in was "lesson study", where you collaboratively plan and collaboratively deliver a lesson cycle, then reflect and review.

But it requires a school that allows for you to fail and learn as well.



**Richard Dare** @dare\_richard · 20h ...  
Yes, this is a really productive model.

this short discussion from [Alice Ward-Gow](#), [Catherine Edwards](#) and [Maryse](#):

-  **Miss Ward-Gow** @mcwardgow · 21h ...  
Q4. Last question tonight 😊  
What is currently the greatest barrier that's stopping your team from being able to plan lessons collaboratively? [#mathscpdchat](#)
-  **Catherine Edwards** @Edwards08C · 21h ...  
Replying to @mcwardgow  
Time , time , more time and prioritising the time! [#mathscpdchat](#)
-  **Maryse #Antiracist** @AllThingsMaths · 21h ...  
And we've lost a lot of time ,e.g. gained time, the last 2 years due to covid and the effects. E.g. TAGs, staff absence and illness.  
[#mathscpdchat](#)
-  **Catherine Edwards** @Edwards08C · 20h ...  
Replying to @mcwardgow  
I think it takes longer to collaborate than to do it myself...  
Although the results are probably not as good  
[#mathscpdchat](#)
-  **Maryse #Antiracist** @AllThingsMaths · 20h ...  
I agree for short term. It's a long term investment  
[#mathscpdchat](#)

and these tweets from [Alice Ward-Gow](#), [Martyn Yeo](#), [Helen Scott](#), [Maryse](#), [Mary Pardoe](#), [Miss Franklin](#) and [Kersten Watkins](#):

-  **Miss Ward-Gow** @mcwardgow · 21h ...  
Q4. Last question tonight 😊  
What is currently the greatest barrier that's stopping your team from being able to plan lessons collaboratively? [#mathscpdchat](#)



**Martyn (He/Him)** @martynyeouk · 21h



Replying to @mcwardgow

I'll give you a guess! #mathscpdchat



**Helen Scott** @HelenScott88 · Dec 7



**Maryse #Antiracist** @AllThingsMaths · 21h



👉 this



**Mary Pardoe** @PardoeMary · 20h



Replying to @mcwardgow

Worth trying to overcome it though!

Have you seen this?

[ncetm.org.uk/features/a-pra...](https://ncetm.org.uk/features/a-pra...)

#mathsCPDchat

When I changed jobs, moving to a large sixth form/FE college, my teaching became much more specialised, focusing mainly on A level Maths and working as part of a team of maths teachers who were also focusing mainly on A level.

I realised very quickly that being able to focus on teaching fewer different classes, and working closely with colleagues teaching similar classes and following the same scheme of work, my teaching, and hence the learning of my students, was improving significantly.

Often, key lessons were jointly planned and resources were shared. Because several of the team were teaching the same topics at the same time, it was easy for us to share feedback and learn from one another's experiences too.

The benefits of teaching fewer different classes and working in teams focused on one or two year groups can be used to good effect in secondary schools. If teachers on the same teams can be timetabled to have a common free period – impossible for a whole department, but much more do-able for a small team – this can allow formal time for joint planning and the sharing of experiences.



**miss franklin** @missfc\_maths · 20h

...

Oh no i haven't. Will have a read of it later.. Its definitely something i want to achieve. Lots of each yr group team have different skills and strengths which i feel would benefit each other to learn from. [#mathscpdchat](#)



**miss franklin** @missfc\_maths · 21h

...

Replying to [@mcwardgow](#)

Time !

I would love as ks3 lead for those planning yr 7/ yr 8 to meet together to discuss the similarities and differences between the different tiers for each unit. I think it would strengthen the planning and provide greater cohesion across each yr grp. [#mathscpdchat](#)



**Kersten Watkins** @kersten\_watkins · 20h

...

We have discussed this before - but everybody has their "preferences/ preferred way ... beyond closed doors they do it their way!!



**Miss Ward-Gow** @mcwardgow · 20h

...

How do we get those team members on board? :-) [#mathscpdchat](#)

(to read the discussion sequence generated by any tweet look at the 'replies' to that tweet)