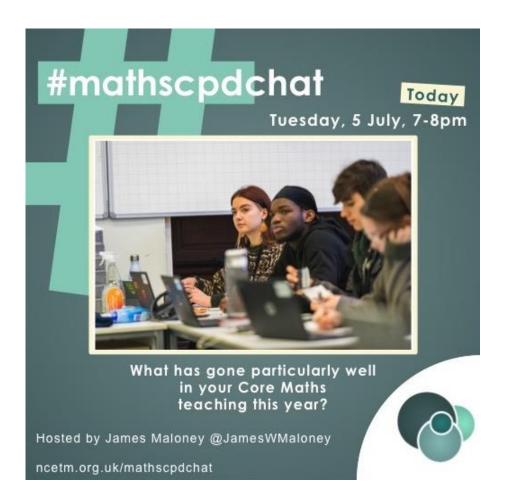


#mathscpdchat 5 July 2022

What has gone particularly well in your Core Maths teaching this year? Hosted by <u>James Maloney</u>

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:

AMSP Core Maths is the place on the AMSP website where you will find comprehensive support and information for teaching Core Maths. The sections are 'Professional Development', 'Strategies for offering Core Maths', 'Resources', 'Curriculum', 'Transition to further study', 'Get Involved' and 'Local Support'. It was shared by <u>James Maloney</u>



Population and household estimates, England and Wales: Census 2021 which is from the Office for National Statistics. It is presented in 12 parts, which include many attractively and clearly displayed charts, graphs and diagrams representing a wide variety of information and relationships. It was shared by James Maloney

<u>Play the Census 2021 population map game</u> which is a recently released game in which players 'move across England and Wales by correctly guessing if the number of people living in an area is higher or lower than others'. It was shared by <u>James Maloney</u>

<u>How the population changed where you live: Census 2021</u> which is a recently released article. You can choose a local authority area and then explore comparisons between aspects of population changes in it with those in other areas. It was shared by <u>James Maloney</u>

<u>Core Maths Specification Networks</u> are networks set up by the AMSP which are 'designed to provide you with the opportunity to discuss and share your experience and develop your practice around the teaching of Core Maths with teachers who are following the same specification as you'. It was shared by <u>Cat van Saarloos</u>

Quality Street: Do you agree with the Nation's favourites? which is a Desmos activity created by Cat van Saarloos. Students rank the Quality Street chocolates in order of their preference and then investigate to see how well they agree with the Nation's favourites. In doing this they plot scatter graphs, work out Spearman's Rho (Rank) correlation coefficient using the formula, and work it out using technology. It was shared by Cat van Saarloos

<u>Core Maths Summer Festival</u> which is an extensive series of online interactive workshops provided by the AMSP. Each session provides resources and activities that can be taken straight to the classroom. It was shared by <u>Cat van Saarloos</u>

<u>Cost of living crisis: inflation</u> which are resources from the Economist Educational Foundation. By using these resources students can learn about what inflation is and how it affects people's standard of living. It was shared by <u>Cat van Saarloos</u>

<u>Questions Inspired by a news story</u> which is material specifically designed and created by <u>Mark</u>

<u>Dawes</u> for students who are studying Core Maths. There are currently more than 95 different Quibans, each of which is an attractively presented full resource. It was shared by <u>Suba V</u>

How and why one Yorkshire school is Teaching Core Maths which is an article on the NCETM website in which Colin Prestwich, a head of maths and Maths Hub Lead, talks about the benefits for students of studying for a Core Maths qualification. It was shared by Mary Pardoe



DFTW Episode 6 - Motivating and challenging students with Tom Rainbow which is a podcast	
discussion hosted by Andy Lumley and Alison Hopper, and including Tom Rainbow. It was shared	by
Mary Pardoe	

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



The host's welcome tweet ...



James Maloney @JamesWMaloney · 14h

Good evening and welcome to #MathsCPDChat. Tonight's topic is 'What has gone particularly well in your Core Maths teaching this year?' Please remember to use the hashtags #MathsCPDChat #CoreMathsChat so everyone can follow the conversation.



... was rapidly followed by this introductory question ...



James Maloney @JamesWMaloney · 14h

2. First up, who is here and how has your day been? (I was going to ask about the price of petrol near you but I don't want to hear the answers! 🧐 #MathsCPDChat #CoreMathsChat

... which prompted the following short conversation ... and which incidentally suggested an idea for a possible Core Maths exploration!



Cat van Saarloos @CoreMathsCat - 14h Replying to @JamesWMaloney

Hello! About £1.99 in Liverpool...



Cat van Saarloos @CoreMathsCat · 14h

Aaah #MathsCPDChat



James Maloney @JamesWMaloney · 14h

No, I like that... £1.89 with me. Or at least it was this morning! #MathsCPDChat #CoreMathsChat



James Maloney @JamesWMaloney · 14h

Been some interesting stuff recently on how much cheaper fuel needs to be to make a detour worth it. Could still be relevant in Sept to have a go with the students, #MathsCPDChat #CoreMathsChat





Cat van Saarloos @CoreMathsCat · 14h

My partner was working with someone who had taken a whole day off work to get the ferry from Arran to mainland in search of cheaper petrol...#mathscpdchat



James Maloney @JamesWMaloney - 13h

Wow! Estimate the price of petrol on Arran? #MathsCPDChat #CoreMathsChat



Cat van Saarloos @CoreMathsCat . 13h

How much would it have to be to be worth that trip...?! #mathscpdchat



Suba V @SubaMaths · 13h Replying to @JamesWMaloney Sorry a bit late..189.9!

James' next question, with a reference to 'current political matters' (?) ...



James Maloney @JamesWMaloney · 14h

Right, let's get to why we're here! (There may have been some news to distract you! (3)

a)What have you done this year, that particularly interested students, and b) How did it help their understanding? #MathsCPDChat #CoreMathsChat

... generated five conversations, including this one, which prompted discussion about some helpful considerations when thinking about engaging students ...



James Maloney @JamesWMaloney · 14h

Replying to @JamesWMaloney

2nd year AQA 2B. made changes to the way we delivered some topics based on last year inc Cost-Benefit Analysis. Rather than straight in with probabilities and expected value etc, we had much more general discuss around how we do cost-benefit in real-life, #MathsCPDChat



Cat van Saarloos @CoreMathsCat · 14h

Replying to @JamesWMaloney

I think that time really pays off later. So important to know why we are working these things out in #CoreMaths #mathscpdchat



James Maloney @JamesWMaloney · 14h

Yes, I was guilty of too 'mathsy' from the off last year. #CoreMathsChat #mathscpdchat





Cat van Saarloos @CoreMathsCat · 17h

Replying to @JamesWMaloney

I have definitely done that when teaching concepts I wasn't so confident with. @SarahDenisonMEI shared some lovely approaches for teasing out more discussion around standard deviation tonight. #mathscpdchat



Mary Pardoe @PardoeMary · 17h

Tom Rainbow, @CoreMathsTom talked about that in this podcast episode: mei.org.uk/episode-6-moti.. #mathscpdchat



An MEI Podcest

mei.org.uk

Episode 6 - Motivating and challenging students with Tom Rainbow - ... Hello and welcome to Digging for the why - the podcast for maths teachers of Years 5-8 looking at continuity and why we need to dig for...

(link provided above)



James Maloney @JamesWMaloney · 17h

Replying to @CoreMathsCat

In revision, I did the same with Critical Path. Showing lots of different types of network, again to get that feel. Will do it next year like that too. #CoreMathsChat #mathscpdchat



James Maloney @JamesWMaloney · 14h

Buying a TV for example. I was advised to get the highest refresh rate I could, at least 120Hz, because I watch a lot of sport. So my cost-benefit analysis was a case of weighing up price, brand, refresh rate and budget. Do I go over my budget? #mathscpdchat #CoreMathsChat

...





Joanne Green @MsJoanneGreen · 17h

@JamesWMaloney #CoreMathsChat #mathscpdchat ...it's not a budget if you've gone over it! Better to have a budget and a contingency that is 30% or more if possible. Why have a TV for all sport, could go and watch it live with a cheaper TV too, possibly.



Cat van Saarloos @CoreMathsCat . 17h

Replying to @MsJoanneGreen and @JamesWMaloney
Great idea for a #CoreMaths investigation! #mathscpdchat



James Maloney @JamesWMaloney · 17h

Replying to @MsJoanneGreen

You haven't seen how much sport I watch! So but a nice way of looking at it in class! #mathscpdchat #CoreMathsChat



Joanne Green @MsJoanneGreen · 17h

@JamesWMaloney #mathscpdchat #CoreMathsChat ...yes, but it's for research for probability, ratio, calculating the production costs, estimating payback duration and rates based upon some type of IPR. Not actually watching sport for 'fun'



James Maloney @JamesWMaloney · 17h

Replying to @MsJoanneGreen

Ah ok then! Yes! I've just booked for The Hundred. Plenty of stats at the cricket! #mathscpdchat #CoreMathsChat



James Maloney @JamesWMaloney · 14h

Students did a similar thing with mobile phones. Removing virtually all the maths to begin with, actually helped when we introduced expected cost etc, as the students had a better 'feel' for what was going on.

#MathsCPDChat #CoreMathsChat



Ms Byrne @MsRByrne · 14h

Replying to @JamesWMaloney

I like the idea of bringing all those things together. I'm struggling at the moment to teach Expected Value in a non-GCSE way. Bringing CBA in earlier might be the way forward! #CoreMathsChat



James Maloney @JamesWMaloney · 14h

Yes, previously I was worried about not getting to the maths early enough, especially as I thought some of the students may not have done it much. But I found it worked for my students. #CoreMathsChat #mathscpdchat





Joanne Green @MsJoanneGreen · 17h

#MathsCPDChat #CoreMathsChat @JamesWMaloney Yes, getting pupils to do research on their phones absolutely grabs their attention and perks them up. Also, it enables you to identify who knows their way around a calculator and who doesn't.



James Maloney @JamesWMaloney · 17h

Replying to @MsJoanneGreen

Sorry, I meant they look at CBA when buying a phone. Badly worded by me over tweets! #CoreMathsChat #mathscpdchat

... and these questions ...

a) What have you done this year, that particularly interested students, and b) How did it help their understanding? #MathsCPDChat #CoreMathsChat

... also prompted this shorter conversation with a different focus ...



Suba V @SubaMaths · 14h

Replying to @JamesWMaloney

Quibans..especially about inflation



Cat van Saarloos @CoreMathsCat · 15h

Replying to @SubaMaths and @JamesWMaloney

Nice! The @Econ_Foundation just released a new resource on Inflation too. #mathscpdchat



Economist Foundation @Econ Foundation · 2h

We have indeed! You can download the free one-hour teaching resource here bit.ly/3P53o9N #mathscpdchat #edutwitter

(link provided above)



James Maloney @JamesWMaloney · 21h

Yeah it something they are seeing everyday now! Some finance topics can still be a bit abstract for them (mortgages etc) but this is day-to-day. Lots of lovely discussion. #mathscpdchat



Mary Pardoe @PardoeMary - 14h

#mathscpdchat



Mark Dawes @mdawesmdawes - May 16, 2021

A new Quibans for #CoreMaths teachers, based on a ridiculous story about the forenames of criminals.

Enjoy!

quibans.blogspot.com/2021/05/quiban...



... and another conversation, in which sources of support for relatively inexperienced teachers of Core Maths were discussed ...



MIF, FSET, MCCT, NPQML @mathingabout · 14h

Replying to @JamesWMaloney

First time teaching Core Maths this year. Teaching it over 2 years so will likely finish content early in the second year. Changing Exam board too. #mathsCPDchat #CoreMathsChat



Cat van Saarloos @CoreMathsCat · 14h

How have you found it? Which lesson was the most enjoyable? Surprising? #mathscpdchat



Sam Barker @samhallsbarker · 14h

Replying to @mathingabout and @JamesWMaloney

What exam board are you doing?



MIF, FSET, MCCT, NPQML @mathingabout · 14h

Replying to @samhallsbarker and @JamesWMaloney

Edexcel



MIF, FSET, MCCT, NPQML @mathingabout · 14h

I would have appreciated guidance on delivery but everything happened so fast that I closed my eyes and when I opened them up I had a core maths class staring back at me! #mathscpdchat



James Maloney @JamesWMaloney · 14h

If you don't know about it the @Advanced_Maths can help! amsp.org.uk/teachers/core-...

And contact your local maths hub!

(link provided above)



MIF, FSET, MCCT, NPQML @mathingabout · 14h

Cheers! I did contact them to attend a CPD session and must chase that up.



Anna Pandrich @AnnaPannaTW · 12h

Replying to @mathingabout and @JamesWMaloney

Both amsp and maths hubs have been amazing, such expertise and so supportive!

... and the fourth conversation generated by these questions ...

a)What have you done this year, that particularly interested students, and b) How did it help their understanding? #MathsCPDChat #CoreMathsChat

... was about contexts that particularly interest students:





Cat van Saarloos @CoreMathsCat · 14h

Replying to @JamesWMaloney

I know I don't have a proper class but I did a Spearman Rank session with Y10 at an @Advanced_Maths enrichment event last week and there were some really interesting responses and engagement from students. #mathscpdchat



James Maloney @JamesWMaloney · 15h

Replying to @CoreMathsCat and @Advanced Maths

Ah lovely! What context did you base the session around? #mathscpdchat



Cat van Saarloos @CoreMathsCat · 14h

Here is an online version of the activity in case anyone would like to do it: teacher.desmos.com/activitybuilde...

I only used Desmos at end when they had to pair up with the best person to share a box of chocolates with and we wanted a quick way of calculating Spearman #mathscpdchat



teacher.desmos.com

Quality Street: Do you agree with the Nation's favo... In this activity students will rank the Quality Street chocolates in order of their preference and then ...

(link provided above)



James Maloney @JamesWMaloney · 14h

Chocolate never fails to engage. And I think you can still tease out important ideas and concepts, that then transfer. #mathscpdchat



Cat van Saarloos @CoreMathsCat · 14h

Yes easily adaptable to any context (top songs, films etc) and a nice end of term activity. They didn't initially like it that they had to speak to students from other schools but warmed up after a while and then there was a nice buzz. #mathscpdchat

The fifth conversation generated by the host's second question ...



James Maloney @JamesWMaloney · 14h

Right, let's get to why we're here! (There may have been some news to distract you! (3))

a)What have you done this year, that particularly interested students, and b)How did it help their understanding? #MathsCPDChat #CoreMathsChat

... was about a rather unusual strategy that a teacher used effectively:





Ms Byrne @MsRByrne · 14h

Replying to @JamesWMaloney

Did a speed-dating lesson where they had to quickly analyse a tweet/graph/headline. Not working with friends&a time pressure, meant more focus on the numbers than the politics!



James Maloney @JamesWMaloney · 15h

Replying to @MsRByrne

That's a clever twist on critical analysis! Was this later on in the year? #CoreMathsChat #MathsCPDChat



Ms Byrne @MsRByrne · 15h

Did it about March time I think, so they were used to "slagging off the statistics" by then ## #CoreMathsChat #MathsCPDChat



James Maloney @JamesWMaloney · 15h

Haha! It's hard not to sometimes! #CoreMathsChat #mathscpdchat



Rebecca B @RebeccaMaths . 11h

This sounds brill, do you have any resources to go with this idea you'd be willing to share?

The (linked-to-Twitter) screenshots below show replies and conversations generated by the host's third and fourth questions and his last general tweet, which was about sources of support. 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 immediately following conversations and replies, represented by screenshots linked to Twitter, were in response to the third question from <u>James Maloney</u>:



James Maloney @JamesWMaloney - 17h

What about the students themselves? How did they find the year? The exams? What have they said to you about the course? #MathsCPDChat #CoreMathsChat

There was an interchange between Ms Byrne and James Maloney ...



Ms Byrne @MsRByrne · 17h

Replying to @JamesWMaloney

My year 12s (2 year course) like that's there's minimal pressure, unlike their other subjects. They can come in and be a bit silly with numbers and get creative!



...



James Maloney @JamesWMaloney · 17h

That's lovely! #CoreMathsChat #mathscpdchat

A 2yr course does help with that! Probably helps them as well!

... and between Sam Barker and James Maloney ...



Sam Barker @samhallsbarker · 17h

Replying to @JamesWMaloney

My 13s were happy with the exams mainly (OCR A) and so was I. They were pleased that I'd managed to predict a fair number of the questions and that I'd spent a lot of time going over the PR with them as they felt prepared going in



James Maloney @JamesWMaloney - 17h

Fantastic! #CoreMathsChat #mathscpdchat

... and between <u>Suba V</u> and <u>James Maloney</u> ...



Suba V @SubaMaths · 17h

Replying to @JamesWMaloney

Students have said the edexcel exam was pretty nice. And that they've enjoyed the course overall. I've set them a survey so looking forward to read their answers. I'll share anything interesting they have said!

#CoreMathsChat



James Maloney @JamesWMaloney - 17h

Yeah, we have a student voice mid-way through the year. I'd like to actually ask them next year so they've had time to reflect. #CoreMathsChat #mathscpdchat

... and between Joanne Green and James Maloney:



Joanne Green @MsJoanneGreen · 17h

@JamesWMaloney #mathscpdchat #CoreMathsChat The pupils were bricking themselves for maths & maths-related exams. Some pupils gave up during & after mocks, yet incentivised some. After the exams, the pupils were 'happy' with the exams and their efforts.



James Maloney @JamesWMaloney · 17h

Replying to @MsJoanneGreen

Yep, we have a split in students like that. #CoreMathsChat #mathscpdchat

There was also a single reply from Mary Pardoe:





Mary Pardoe @PardoeMary · 17h

Replying to @JamesWMaloney

Not this year .. but this is from an interesting article here:

ncetm.org.uk/features/how-a.. #mathscpdchat

In 2018, 39 students took the exam, with 25% achieving an A grade.

Three did not achieve a pass grade but they all valued their increase in confidence with using maths in their everyday lives.

In 2019 we are expecting to enter 50 students, and at present 104 students are studying Core Maths in Year 12.

To date, over the three years, 49% of students have achieved a B+ grade and 96% an E+ grade.

(link provided above)

The next conversation, represented by screenshots linked to Twitter, was in response to the fourth question from <u>James Maloney</u>:



James Maloney @JamesWMaloney · 17h

Ok another question: Anything you've tried this year, that didn't quite work this time, but that you'll alter and use next year? #MathsCPDChat #CoreMathsChat

The discussion that this question generated was about students' ability to use spreadsheets and other aspects of technology, and was between <u>Suba V</u>, <u>James Maloney</u>, <u>Ms Byrne</u> and <u>Sam Barker</u>:



Suba V @SubaMaths · 17h

Replying to @JamesWMaloney

I'd like to better structure my "spreadsheet skills" lessons



James Maloney @JamesWMaloney · 17h

Ah, yes! This is a big one for me. Getting a computer room etc. Do you drip feed in other sessions like finance etc? And they don't cover excel in schools like they used to. #CoreMathsChat #mathscpdchat



Suba V @SubaMaths · 17h

Yes I try to do a finance type project and also do a bit when we look at sequences



Ms Byrne @MsRByrne · 17h

Replying to @JamesWMaloney

I've gone from a class of 5 to 20; so just learning to structure lessons and discussions and pace of the lesson. Also, want to involve more tech; Desmos/excel and such. #CoreMathsChat





Sam Barker @samhallsbarker · 17h

Replying to @JamesWMaloney

Agree with Suba - my 12s have been weaker than in previous years and this has been noticeable with spreadsheets. I have added more scaffolding



Ms Byrne @MsRByrne · 17h

Agreed! Last years cohort could do the excel questions without us ever even opening a spreadsheet together, current year 12s are far less confident #CoreMathsChat



James Maloney @JamesWMaloney · 17h

I've not got it to hand but there a couple of Microsoft Self Teach spreadsheets, that we've used as well. They cover more than needed but are useful for independent learning. #CoreMathsChat



Sam Barker @samhallsbarker · 17h

That sounds interesting. I've recommended a few courses as part of induction. Would love to see what you have. #coremathschat #mathscpdchat



James Maloney @JamesWMaloney · 17h

I can't find the page that used to be there at all. When I'm next in college I will get the spreadsheet in a dropbox and send you a link. #CoreMathsChat



Ms Byrne @MsRByrne · 17h

Replying to @JamesWMaloney and @samhallsbarker

Ooo fab!! I like the look of the mortgage calculator from the conference the other week. One of my revision sessions for Aut2 already planned haha

The final sequence of tweets represented by screenshots linked to Twitter was in response to this statement from James Maloney:



James Maloney @JamesWMaloney - 17h

Wow! Time is going fast! So just a few things I've found I'm going to use next year from the Census 2021 first release! #CoreMathsChat #mathscpdchat



James Maloney @JamesWMaloney · 17h

Replying to @JamesWMaloney

This is the main page with some interesting graphs and info.

ons.gov.uk/peoplepopulati..
#mathscpdchat #CoreMathsChat

(link provided above)





James Maloney @JamesWMaloney · 17h

12.The ONS has produced some nice interactives. Here's one where you try to guess the population higher/lower in a path from one area to another. #MathsCPDChat #CoreMathsChatons.gov.uk/peoplepopulati...

(link provided above)



James Maloney @JamesWMaloney - 17h

13. And what I think will engage students, you can look at local data and how the population has changed here: #MathsCPDChat #CoreMathsChat ons.gov.uk/peoplepopulati...

(link provided above)



Sam Barker @samhallsbarker · 18h

Replying to @JamesWMaloney

We have had massive changes in my area so this is super interesting #coremathschat

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

James closed the chat with this message ...



James Maloney @JamesWMaloney - 18h

Wow! That hour went quickly! Thanks and see you in the autumn! Have a lovely summer everyone! I will follow up a few tweets now, but do check back on tonight's chat and post your thoughts! #MathsCPDChat #CoreMathsChat





... and the day after the chat the following information was shared:



Cat van Saarloos @CoreMathsCat · 16h

Next week! Join @NYTimesLearning @comparagrams and @El_Timbre for the final two brilliant sessions

#CoreMathsFestival #mathscpdchat



Sarah Denison @SarahDenisonMEI · 17h

I have had such a fabulous day. Brilliantly well organised KS5 maths conference from @Advanced_Maths & @MathsHubs & then a really enjoyable #CoreMathsFestival session with the always awesome @CoreMathsCat. Really looking forward to the last two sessions amsp.org.uk/events/details...

12 Jul

What's Going On in This Graph? with The **New York Times**

National

14 Jul

Climate change and maths

National