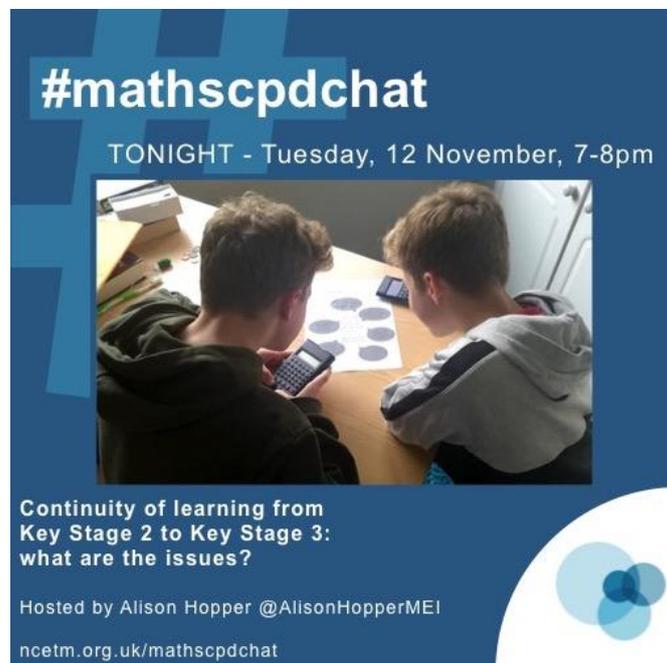


## #mathscpdchat 12 November 2019

### Continuity of learning from Key Stage 2 to Key Stage 3: what are the issues?

Hosted by [Alison Hopper](#)

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



#mathscpdchat

TONIGHT - Tuesday, 12 November, 7-8pm



Continuity of learning from  
Key Stage 2 to Key Stage 3:  
what are the issues?

Hosted by Alison Hopper @AlisonHopperMEI

[ncetm.org.uk/mathscpdchat](http://ncetm.org.uk/mathscpdchat)

Some of the areas where discussion focussed were:

- **attempts to ‘bridge the Key Stage 2/3 (KS 2/3) transmission gap’** ... learning about possible ways of doing this by ‘working with my local Maths Hub’ ... learning by participating in a Secondary Mastery Specialist course ... learning about the ‘importance of a well sequenced curriculum, with a focus on understanding’ ... designing a new KS3 scheme of work, seeing planning as a whole-department-together task;
- that it is effective for **primary and secondary teachers to share Professional Development** ... that is, to develop professionally **together and continually**;

- that when working together in cross-phase groups it is essential to establish **mutual respect and trust** of everyone by everyone;
- all (both primary and secondary) teachers of maths endeavouring to **understand how the GCSE mathematics content builds on each child's learning from birth onwards**, including during Early Years through to Key Stage 4 ... for example one contributor had traced back to Key Stage 1 the 'pre-requisites' for a particular GCSE objective;
- that **joining a professional association provides opportunities** for primary and secondary teachers each to get much more of an understanding of what is happening in the other sector;
- that it is sensible to aim for cross-phase mutual understanding of only **one particular aspect** of the teaching and learning of mathematics (such as a well-defined 'content-area') at a time, rather than trying to 'get it all right all at once' ... for example primary and secondary teachers working together on the Maths Hubs project that aims to achieve continuity in fraction learning between Year 5 and Year 8;
- **working together 'with clusters in our area'** ... for example, looking at consistency in vocabulary and representations when teaching about fractions ... developing an 'all-through' KS1/2/3 scheme of work;
- **secondary teachers visiting their feeder primary schools** ... that some secondary teachers have difficulty getting time to visit primary schools ... primary teachers inviting secondary maths teachers into their schools to observe assessment-moderation meetings;
- teachers from a secondary school and from its feeder primary schools **meeting once every half term to discuss the teaching and learning of a particular topic** (such as division or algebra), including 'what we and the pupils do', 'what we expect (from pupils / pupils to do)', manipulatives, and other resources/aids that 'help us ensure that pupils feel happy and challenged';
- secondary teachers using **NCETM Primary Mastery PD Materials**, and primary teachers using **NCETM Secondary Mastery PD Materials** (link provided below) ... secondary teachers discovering, for example, that pupils have not 'experienced' as much algebra prior to KS3 as they had previously assumed;
- that secondary teachers are not always aware of KS2 'coverage' and teaching strategies, and, as a result, do not build effectively on pupils' prior learning ... consequently some pupils develop maths-anxiety in KS3;
- that secondary teachers are (sometimes) **surprised by the level of the mathematics addressed in KS2, and by pupils' confident use of multiple**

**representations** ... that primary teachers are (often) surprised by discovering that some secondary maths lessons are in the afternoon;

- that knowledge about pupils' mathematics learning 'in the other phase' goes both ways; that **KS1/2 teachers need to be aware of what the primary maths curriculum leads onto in KS3/4**;
- that the high level of mathematical **subject knowledge demanded of Y6 generalist teachers** is often unrecognised;
- that **KS2 SATs scores** cannot be relied on by Y7 teachers to indicate where the gaps are in pupils' knowledge and understanding;
- ensuring that if **parental engagement** with their child's mathematical learning has become well-established in KS1/2, engagement is continued (built-on) in KS3;
- providing opportunities for pupils to **observe their teacher reasoning mathematically** (and offer suggestions) ... pupils learning what thinking like a mathematician is like;
- giving pupils in all Key Stages a **'safe' environment** in which, given opportunities, they show what they can do mathematically;
- pupils seeing and **working-on each other's solutions of a problem**;
- the possibility of a **secondary school employing a primary school teacher** to teach maths in Key Stage 3;
- that **making contact, and 'starting the conversation'** with one feeder school, or with one school that your pupils feed into, is a great way to start developing mutual cross-phase knowledge and understanding.

In what follows, click on any screenshot-of-a-tweet to go to that actual tweet on Twitter.

This is part of a 'conversation' of tweets about how a teacher who is second in department in a secondary school has started to work with her department to establish continuity of learning from KS2 to KS3. The conversation was generated by this tweet from [Alison Hopper](#):

[Hopper](#):



**Alison Hopper** @AlisonHopperMEI · Nov 12

Welcome to this evening's chat about continuity of learning from KS2 to KS3:  
What are the issues?

Who's out there this evening? Are you primary or secondary based?

Please remember to use the hashtag [#mathscpdchat](#) so that all responses are logged.

and included these from [Kathryn Darwin](#) and [Alison Hopper](#):

-  **Kathryn** @Arithmaticks · Nov 12  
Replying to @AlisonHopperMEI  
Kathryn here :) second in department in secondary in Dewsbury. Look after KS3 curriculum and developing all through scheme of work. Trying hard to bridge the transition gap! #mathscpdchat
-  **Alison Hopper** @AlisonHopperMEI · Nov 12  
Thanks for joining in @Arithmaticks. What would you say has had the biggest impact in your work so far? #mathscpdchat
-  **Kathryn** @Arithmaticks · Nov 12  
Work with @OGACADEMY in my NQT and RQT, then working with @YHMathsHub and @ncetm on Secondary Mastery Specialist course has taught me the importance of a well sequenced curriculum, with a focus on understanding. Always have this in mind and I still in dept. #mathscpdchat
-  **Alison Hopper** @AlisonHopperMEI · Nov 12  
Has it led to many changes for your department? Has there been a positive reception to the changes? (Sorry - questions are flowing this evening!) #mathscpdchat
-  **Kathryn** @Arithmaticks · Nov 12  
Massive for us. I've designed the new scheme with it in mind and beginning work on planning as a department too. People are thinking more about how to introduce and build on topics. #mathscpdchat

and these from [Maths @ Chi Uni](#) and [Kathryn Darwin](#):

-  **Maths @ Chi Uni** @skemathschi · Nov 12  
And often secondary teachers are not always aware of KS2 coverage and strategies so don't build on prior knowledge in the most progressive way #mathscpdchat
-  **Kathryn** @Arithmaticks · Nov 12  
We're trying hard to combat this. I've been to our main feeder and fed back and we also now have an all through scheme of work which I've built including KS1/2 curriculums too. Working hard on "mastery" and teaching for understanding too! #mathscpdchat

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

Among the links shared were:

[Key Stage 3: the wasted years](#) which is an Ofsted article that was commissioned by Her Majesty's Chief Inspector in order to get an accurate picture of whether Key Stage 3 is providing pupils with sufficient breadth and challenge, and helping them to make the best possible start to their secondary education. It was published in 2015 and was shared by [Alison Hopper](#)

[NCETM Mastery PD materials](#) where you will find a range of mastery materials that provide professional development and guidance to help teachers in both primary and secondary schools develop a mastery (of mathematics) approach in their classrooms and schools. It was shared by [Louise Staples](#)

[Improving Mathematics in Key Stages Two and Three](#) which is a guidance report from the Education Endowment Foundation (EEF). It was published in 2017. It was shared by [Alison Hopper](#)

[Secondary Mastery Specialist Programme](#) where you will find information about the Secondary Mastery Specialist Programme that began in 2016/17. The programme is for mathematics teachers who want to become experts in teaching for mastery and work towards taking it beyond their own schools. It was shared by [Kathryn Darwin](#)

[NCETM Accredited PD Lead Programme](#) where you will find information about the development and accreditation training programmes that lead to accreditation to lead professional development for teachers of mathematics. It was shared by [Kathryn Darwin](#)

[Continuity in fractions learning between Year 5 and Year 8](#) which is a NCETM podcast discussion around how learning about fractions builds across the four transition years from KS2 to KS3, set in the context of a broader Maths Hubs national project looking at continuity of maths learning generally from Year 5 to Year 8. It was shared by [Mary Pardoe](#)

[Calculator Crunch](#) which is a fun and free summer challenge designed to get Year 6s and above 'calculator-ready' for the secondary curriculum, and which will return in the summer of 2020. It was shared by [Mary Pardoe](#)

[NRICH at Every Stage](#) which is an article (2018) by Alison Borthwick that will support teachers planning mathematical tasks specifically for pupils moving from any learning-stage to another. It was shared by [Mary Pardoe](#)

[Improving Reasoning: Analysing Different Approaches](#) which is an NRICH article by Malcolm Swan that will support teachers who are trying to enable pupils to stick with a problem and revise and refine their solutions over some time. It was shared by [Mary Pardoe](#)

[Why we employed a primary teacher for maths in our secondary school](#) which is an article on the NCETM Features page. It was shared by [Mary Pardoe](#)

[Association of Teachers of Mathematics \(ATM\)](#) which is a professional association for anyone involved in mathematics education. It was shared by [Mary Pardoe](#)

[Mathematical Association \(MA\)](#) which is a professional association for anyone involved in mathematics education. It was shared by [Mary Pardoe](#)

[MathsNAV](#) which is support for medium term planning of mathematics learning in Key Stages 1, 2 and 3. It was shared by [Dave Bowman](#)