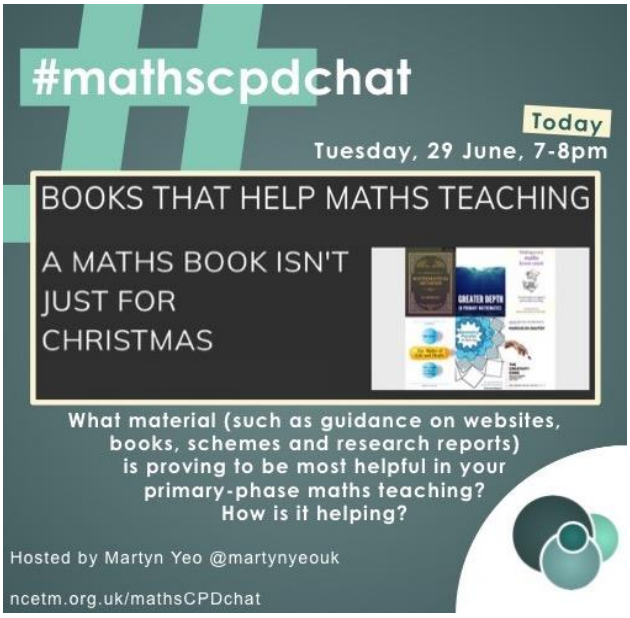
#mathscpdchat 29 June 2021

What material (such as guidance on websites, books, schemes and research reports) is proving to be most helpful in your primary-phase maths teaching? How is it helping??
Hosted by Martyn Yeo

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



Among the links shared during the discussion were:

Mr Yeo's Maths Mastery which is Martyn Yeo's own YouTube channel. In his videos Martyn demonstrates how various manipulatives and representations can support the development of understanding about, and fluency in performing, arithmetical operations. His playlist includes a wide range of material, arranged in diverse categories such as 'DfE guidance', 'ATM Maths Snacks' and 'NCETM maths', that Martyn has selected to inform and inspire primary mathematics teaching. It was shared by Mark Williams and Martyn Yeo

Primary Mastery Professional Development Materials: Fractions Spine 3 which is guidance material from the NCETM. It is divided into ten segments for Years 3-6, plus a preliminary segment for Key Stage 1. It includes text and images (which are also presented as animated PowerPoint slides that can be used in the classroom, and are designed to further enhance teacher knowledge). It was shared by Jenni and Martyn Yeo

Let's Think Maths which are resources from Let's Think Maths (CAME, Cognitive Acceleration in Maths Education) that are designed to support the development of mathematical reasoning and problem solving from Early Years to Key Stage 3. The lessons complement a mastery approach to teaching and learning. It was shared by Sarah Slattery

Reasons to Reason in Primary Maths and Science which is a book by Alison Borthwick and Alan Cross. The authors explore what reasoning in primary mathematics (and reasoning in primary science) *is* and what it *is not*. It includes examples of how reasoning in primary mathematics can develop. It was shared by Sarah Slattery

The Elephant in the Classroom: Helping Children Learn and Love Maths which is a book by Jo Boaler. The author identifies problems facing children in mathematics classrooms, and offers some solutions. It was shared by Sarah Slattery

Maths Concept Cartoons which is a book by John Dabell, Brenda Keogh and Stuart Naylor. Simple cartoon-style drawings present pupils with misconceptions (identified through extensive research) and generate discussion and argument. It was shared by Sarah Slattery

Setting pupils up for success in maths which is an Education Endowment Foundation (EEF) podcast. The host, Alex Quigley, discusses best practice in maths teaching with Simon Cox, Craig Barton and Fliss James. The discussion addresses issues that include those related to establishing strong foundations in the early years, and making purposeful use of pupils' misconceptions. It was shared by Jenni

Using an abacus-like rekenrek to help children develop confidence and fluency with number which is a NCETM video by Debbie Morgan, the NCETM's Director for Primary. It was shared by Martyn Yeo

Rekenrek101 which is Amy How's website. (During the chat Amy tweeted 'Keep an eye out for some mathematicians that will show how exciting the rekenrek is! Check out my website!'). It was shared by Amy How

Double Facts using the Rekenrek which is a YouTube video in which Amy How demonstrates ways of using the 20-bead rekenrek 'to teach Doubles'. It was shared by π/8 Chadwick

Amy How: Live Stream Rekenrek Demo and Q&A which is a recording on YouTube of a live stream discussion between Amy How and Atul Rana in which Amy demonstrates 'the use of a 2-

row and 10-row rekenrek to establish a strong foundation of number work and place value'. It was shared by Atul Rana

Key ideas in teaching mathematics which is research-based guidance for teachers of mathematics by Anne Watson, Keith Jones and Dave Pratt, with suggested classroom tasks. It was shared by Mary Pardoe

Thinking Deeply About Primary Mathematics which is a book by Kieran Mackle. The author explores theories about, and ideas and practices in, primary-phase mathematics teaching. The chapters include explanations, examples and tasks designed to help increase the confidence of primary teachers when they are helping their pupils learn (to do) mathematics. It was shared by Mark Williams

Thinking Deeply About Primary Mathematics: Podcast which is a collection of podcast interviews on Kieran Mackle's website in which Kieran talks to many different primary-phase maths educators about a wide range of ideas and issues in the mathematics teaching and learning of primary-age pupils. It was shared by Mark Williams and Atul Rana

Thinking: Primary Mathematics which is a blog post by Tom Oakley in which you will find his suggestions for books, websites and blogs that can 'support your thinking about primary mathematics'. It was shared by Tom Oakley

Readings and Musings which is Lisa Coe's blog. It is, in Lisa's own words, 'a collection of summaries, musings and thoughts around educational books and readings', and includes her reflections on some recently published books about teaching and learning maths (such as *Mathematical Tasks* by Chris McGrane and Mark McCourt and *Visible Maths* by Peter Mattock). It was shared by Lisa Coe

Bernie Westacott: Teaching maths with visuals and manipulatives which is an episode of the Mr Barton Maths Podcast that was also filmed. Bernie Westacott talks to Craig Barton about teaching mathematics 'in a visual way, via the use of manipulatives and other representations'. It was shared by Atul Rana

Neil Almond: Third Space Learning which is, in words tweeted by Neil Almond during the chat, 'my author page that has links to all that I have written'. It was shared by Neil Almond

Just Imagine: Mathematics books which is a collection of books about mathematical topics that have been selected by a publisher as suitable for reading by/to primary-age children. It was shared by Tom Oakley

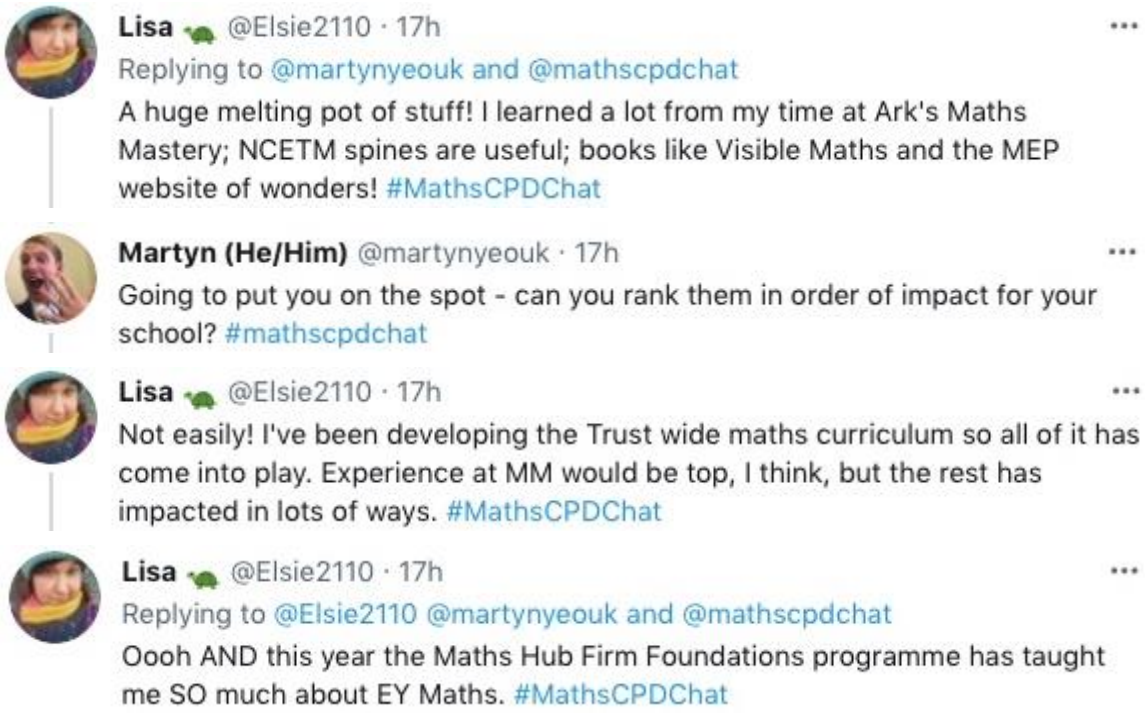
Ofsted's research review: standing on the shoulders of (maths) giants? which is an ArkCurriculum+ blog by Laura Tyler. It was shared by Lisa Coe

#MathsChatLive with @MissSDoherty @Iwilliamsjones @Kieran_M_Ed which is the recording of a #MathsChatLive discussion (pscp.tv) about primary-phase mathematics teaching. It was shared by Atul Rana

#MathsChatLive with @MissSDoherty (Shannen Doherty) and friends which is the recording of a #MathsChatLive discussion (pscp.tv) about the book *100 Ideas for Primary Teachers (Maths)* by Shannen Doherty. It was shared by Atul Rana

The screenshots below, of chains of tweets posted during the chat, show parts of three conversations about material that teachers have engaged with and found to be helpful. **Click on any of these screenshots-of-a-tweet to go to that actual tweet on Twitter.**
The conversations were generated by this tweet from Martyn Yeo:

and included these from Lisa Coe and Martyn Yeo:



these from Sarah Slattery, Martyn Yeo and Lisa Coe:

Sarah Slattery @MissSlatterySTJ · 17h
Yeah, the lessons are for different age ranges but they can be used across the whole school. It's great to go back to one of the lessons a year or 2 later too. Brings about great collaboration, discussion and variety in representation. #mathscpdchat

Lisa @Elsie2110 · 17h
Replying to @martynyeouk @MissSlatterySTJ and 5 others
That's a new one on me! This is why I love social media :) #MathsCPDChat

these from Jenni, Martyn Yeo and Heather Scott:

Jenni @tousledmop · 17h
Replying to @martynyeouk and @mathscpdchat
NCETM materials for fractions (KS2) were brilliant this term, so precise & on point.

Martyn (He/Him) @martynyeouk · 17h
The spine materials? #mathscpdchat

Jenni @tousledmop · 17h
Yes- I will look at these every term.

Heather Scott @MathsladyScott · 19h
Replying to @martynyeouk
Have you got a link to those materials please? #mathscpdchat

Martyn (He/Him) @martynyeouk · 19h
Replying to @MathsladyScott
ncetm.org.uk/teaching-for-m..

Should be the ones #mathscpdchat

Fractions
Spine 3 of the Primary Mastery Professional Development Materials
ncetm.org.uk

and these from Jenni, and Martyn Yeo:

Jenni @tousledmop · 17h
Replying to @martynyeouk and @mathscpdchat
.. I also loved some of the EEF research & podcasts about using resources

Martyn (He/Him) @martynyeouk · 17h

Replying to @tousledmop and @mathscpdchat

Always great things coming out from @EducEndowFoundn who show their research and give recommendations

#mathscpdchat

Jenni @tousledmop · 17h

This one: EEF podcast: 'Setting pupils up for success in maths'

LISTEN:eef.li/tTRqGK

In this instalment, host Alex Quigley discusses best practice in maths teaching, from establishing strong foundations in the early years, use of resources & chns misconceptions:

New EEF podcast: 'Setting pupils up for success in maths' | News

Today, the EEF has published the third episode of our podcast, 'Evidence into Action', focusing on 'Setting pupils up for success in maths'.In this

educationendowmentfoundation.org.uk

Martyn (He/Him) @martynyeouk · 16h

Why was this one effective for you? #mathscpdchat

Jenni @tousledmop · Jun 29

Replying to @martynyeouk @mathscpdchat and @EducEndowFoundn

Just the reinforcement that teachers need to be aware & have pre planned for misconceptions, so we can pre-empt & help them tackle!

Jenni @tousledmop · 19h

Replying to @martynyeouk @mathscpdchat and @EducEndowFoundn

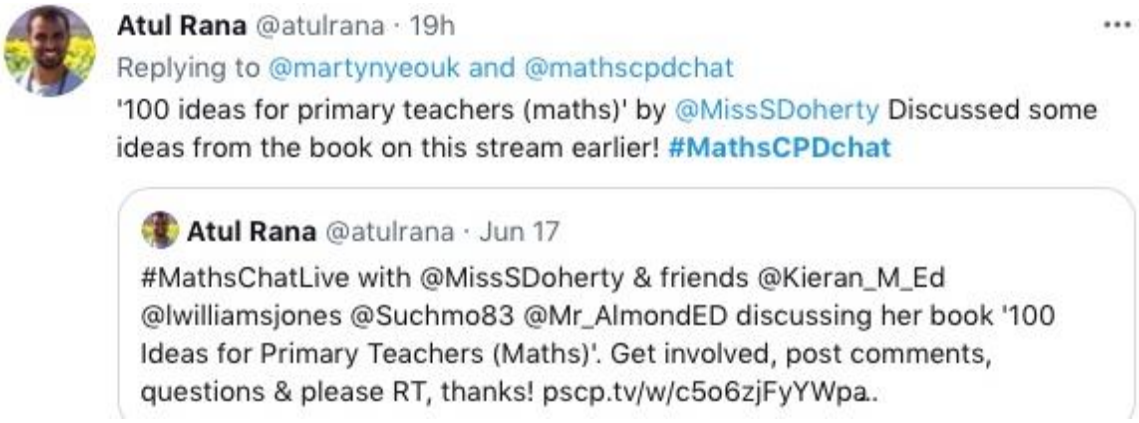
Also the NCETM glossary. I'd love the NCETM to produce a child-friendly language definition too though!

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

Other areas where discussion focused were:

at the start of the chat the host tweeted this poll:

then a teacher replied to an earlier tweet from the host which he had posted on the day before the chat as a reminder of tonight's topic:



- this generated a short discussion about #MathsChatLive, which is a live interactive video chat between maths teachers during which 'anyone can ask questions on twitter when live and get involved';

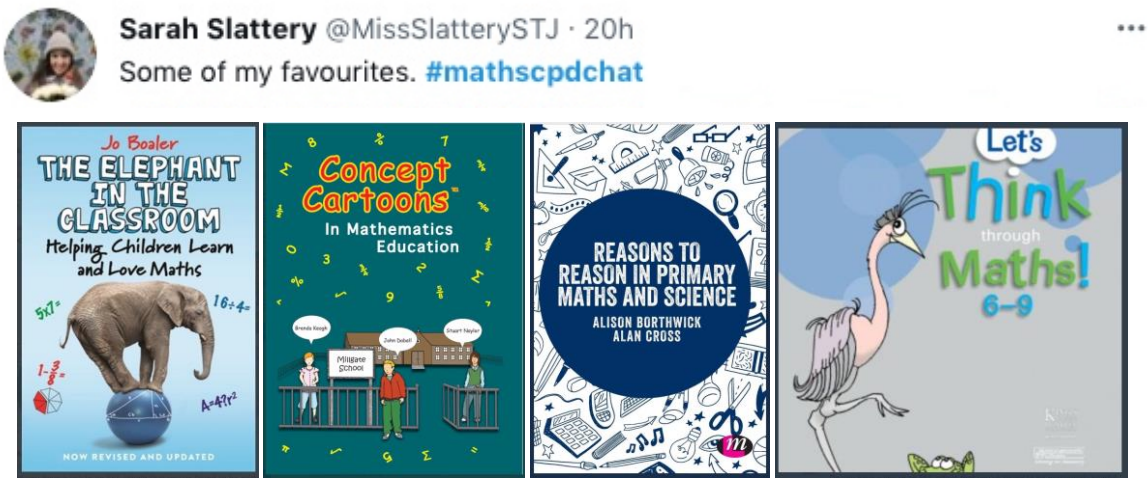
the host's first question was the main question of the chat: 'what material is proving most helpful in your primary maths teaching?' … although most of the responses to this question are shown in the sequence of screenshots-of-tweets presented above, some other experiences were mentioned:

- when the host inquired into how a teacher's knowledge acquired through her reading has impacted on the mathematics learning of pupils in the five schools in which she works, the teacher replied that 'the main way in school has been **developing language use: upskilling teachers, ensuring full sentence answers** … both have had a positive impact particularly on confidence and enthusiasm for maths';
- a teacher commented that she had been **encouraged 'to pick up educational research to improve our teaching'** by engaging with material on Craig Barton's website;

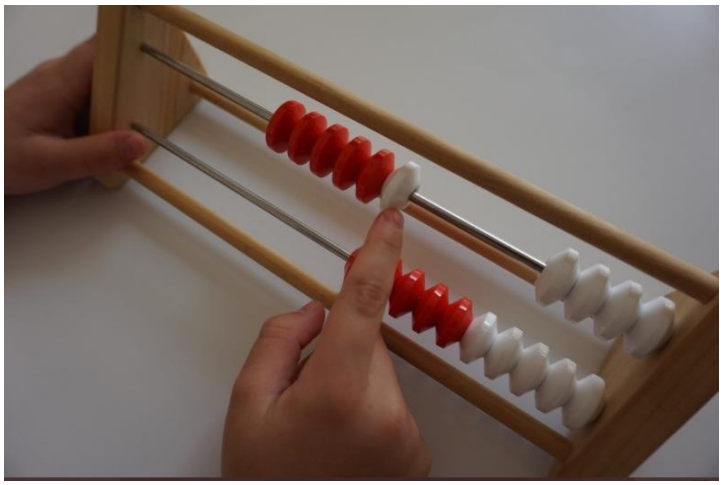
the host asked whether a particular *Best Books for Schools* website (link provided above) might be useful as a starting point for some reading, and what other starting points teachers would recommend:

- teachers mentioned their own and other people's **blogs** (links provided above);
- some **podcasts 'with a maths focus'** were mentioned … this prompted a short discussion about whether, on the whole, teachers prefer to read about, or listen to, material in-order-to/that-is-intended-to support their maths teaching … a teacher pointed out that taking part in a podcast discussion in itself may contribute to a teacher's professional development … it was also noted that 'this year has been exceptionally exhausting and while I prefer to read and annotate than listen, it's been a struggle';

a teacher tweeted images of the front covers of four of her favourite books about maths teaching and learning (links provided above):



the host showed an image from a video about using a rekenrek (link provided above) …



… and asked teachers what other video guidance they would recommend:

- teachers agreed that the use of **rekenreks** by children helps to develop their 'number sense' … for example 'they show most clearly things like double 6 is double 5 plus 2, the '5 and a bit' concept of number' … discussion focussed on videos by Amy How;
- some other videos that have inspired some teachers were mentioned (links provided above) … such as these:

the host's final question was about materials that teachers have not found to be useful in supporting primary maths teaching and learning:

- this question generated only a very few replies, including this one;