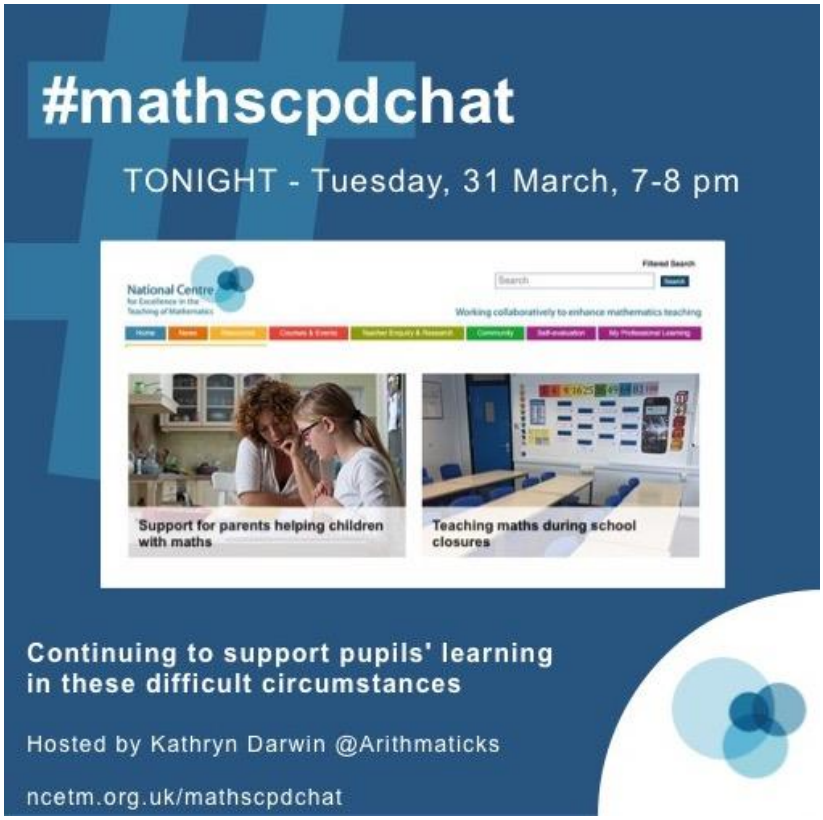
#mathscpdchat 31 March 2020

Continuing to support pupils' learning in these difficult circumstances
Hosted by Kathryn Darwin

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



Some of the areas where discussion focussed were:

time spent by maths teachers in school since the school-closures … the chat host (Kathryn Darwin) conducted a poll to get an idea of the situation … the percentage of respondents in each of three categories was as follows:

- **'in school every day' ➔2.6%,**
- **'a few days on a rota' ➔13.2%,**

- **‘working from home every day’ ➔84.2%**;

how teachers are coping generally with working from home and managing their pupils’ remote learning:

- that some teachers are **going into school ‘on a rota’ to ‘mind’ the few children who are there** … for example playing maths games with them using calculators … a rota example is ‘two weeks working at home followed by one week in school’ … that some teachers have not yet been asked to go into school at all;
- **starting to ‘settle in’ to a rhythm of distance learning and teaching that is still quite alien** … for example, narrating over PowerPoint slides (that is, recording ‘narrations’ that students play while looking at the slides), ‘broadcasting’ to pupils in real time, sending photos of worked examples to talk about with students, using ‘Team’ chats to ‘iron out any issues’, using a visualiser;
- that teachers’ **experiences of planning-learning, and trying to teach, in the home environment have been ‘mixed’**, some days being productive, and others not so much … that ‘home-working-time’ has to be ‘juggled’ to fit with the activities of other family-members … trying to establish and stick-to a routine … enjoying online department meetings conducted using Zoom;
- that the **extra support on offer** from, for example MEI, the NCETM, and the ATM (links below), is valued, particularly resources to support students’ learning to reason and solve problems … using Twitter to ‘drip-feed prompts to students’;
- that the **second week of ‘remote’ teaching is going better than the first week**, although teachers are still struggling to get all students ‘on board’ consistently … that some students are working to their own timetables rather than their teacher’s, so they miss some of the support that the teacher is trying to provide … that few ‘lower-attaining’ pupils are engaging, and that therefore **the gap between ‘lower- and higher-attaining’ pupils is likely to widen**;
- that it is **important for teachers to see students’ work** … for example teachers do not always see students’ responses to Hegarty Maths online tasks;
- that **some strategic changes made to cope in the present circumstances (‘trying something new’) may become permanent changes** … for example deciding to use Google Classroom for homework (using the assignment feature on Google Classroom enables the teacher to upload any task, or even a video, and students can then submit their responses as documents or as photos so that the teacher can then give them feedback) … that videos are ‘fairly easy’ to make within Google Drive … that students have been enjoying/engaging-with some videos made by teachers and not enjoying/engaging-with others … some teachers are setting-up collections of their own videos on YouTube;

- that a present challenge is **the need to achieve consistency across a department in what individual teachers provide to support/facilitate home learning** … some teachers are more competent/happier than others as 'new-users' of the necessary technology;

the most positive aspects of teachers' remote-teaching experiences up to now:

- **having time to think about the best way to do things that are usually 'hard to fit in'**, for example … working on a scheme of work … 'considering the 'why' of our curriculum' … for example considering the order of topics in relation to students' prior knowledge and connections within mathematics … learning, and reflecting on, other teachers' views and ideas;
- receiving **emails from students**, seeing that the students are well and that they are doing some maths;
- having **time to look for and explore 'new' resources online**, particularly those on new website pages that have been set-up recently to support remote mathematics teaching and learning;
- students helping their teachers with **technical aspects of delivering 'online teaching'** … enjoying exploration of, and ways-of-blending, different ways of using technology to teach remotely, for example hosting live 'question-and-answer' sessions with students … that some students are excluded from such sessions because they do not have access to essential devices/technology;
- that **primary and secondary teachers are enjoying learning from each other**;

less positive aspects, up to now, of teachers' remote-teaching experiences:

- that **student teachers are missing out on time gaining valuable experience of working face-to-face with teachers and pupils in actual classrooms** … the need to think about the extra support that these students may require when they become Newly Qualified Teachers in September … reference was made to professional development videos that are available now;
- **teachers themselves feeling 'disconnected' from pupils** … that a consequence of not being with pupils in 'real' classrooms is teachers not having opportunities to 'feed off pupils' energy';
- that deciding **how much home-learning material to provide** is not straightforward;
- that **some students and/or parents are not responding to emails containing practical information (e.g. the times of online sessions) sent to them by teachers** … teachers consequently feeling that they have to run online sessions solely to communicate such information;
- having to spend (not being used to spending) **so much time looking at a computer screen** … consequently suffering from 'tired eyes';

- that in households where there are now more people at home during the working-day it can be **difficult to concentrate on wor**k;

resources that teachers have used up to now in order to help students learn mathematics ‘from a distance’:

- links to all the **websites mentioned** are provided below;
- the **kinds of resource** used included … lesson videos, automated assessments with automated video feedback on every question, online worksheets, online tests;
- whether teachers want to provide **‘any stuff just to keep pupils occupied’** or **tasks that provide opportunities for deep thought and reflection** … achieving the ‘right’ balance, in material and resources that are provided, between … showing ‘the’ method’ followed by an exercise of similar exercises … problems-to-solve that require pupils to reason mathematically … and (possibly ‘open-ended’) tasks intended to generate exploration … that it is harder to prompt students when teaching remotely;
- whether it is possible to be sure that the kinds of task set will not have the potential to ‘**cause tension at home**’;

how teachers are adjusting to working at home:

- that **without ‘immediate deadlines’ it can be hard to be productive**;
- that it is good to have the time to **take advantage of PD opportunities**;
- that at first teachers were **working for much longer than normal**, but are now beginning to reduce the time, for example by conducting online lessons in real time;
- that it is good to have **time to plan ahead** … for example, to plan teaching and learning for the next academic year;
- that (while not teaching a normal timetable) teachers are ‘**chatting a lot more with colleagues**’, and consequently ‘coming up with new ideas’;
- making an **effort to keep up-to-date records of pupils’ engagement and achievements** … awareness of the real possibility that wide gaps in the knowledge and attainment of pupils will develop;

teachers’ observations about student-engagement so far:

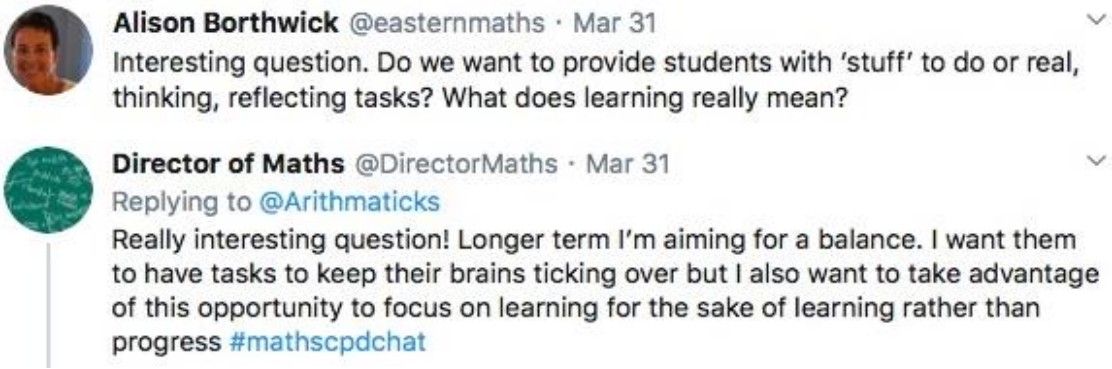
- that it is **harder for primary-school teachers to check pupil engagement** because parents presently take a central role in their children’s learning;
- setting students **deadlines for the completion of tasks** … for example, when one teacher set the deadline for 7 pm the next day only 5 out of 17 students completed the task … that less harsh deadlines result in many more ‘returns’ because families can then plan their time effectively … that some senior teachers are asking teachers to set ‘daily tasks’;

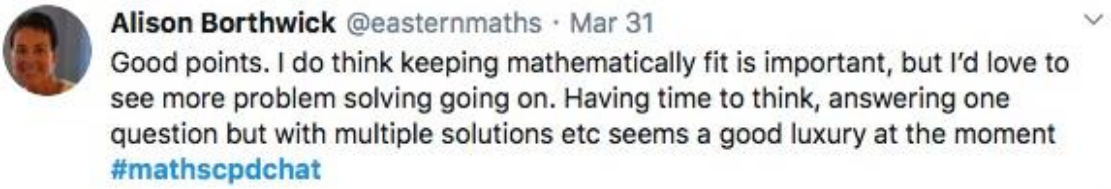
- that some students have been **doing more work than was set**;
- that **providers of some popular online platforms** that were difficult to access at the start of home learning have **now solved technical problems** caused by an initial 'overload'.

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

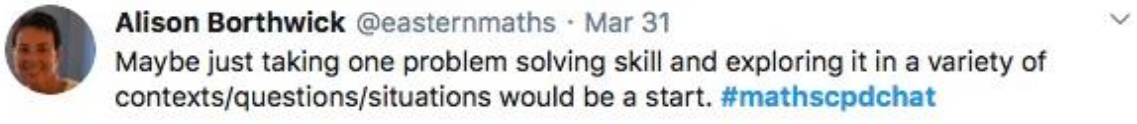
This is a part of a conversation about the kinds of task that teachers may set for pupils to work on at home, and how, and to what extent, open-ended or problem-solving tasks can be used effectively in the present circumstances. The conversation was generated by this tweet from Kathryn Darwin:

and included these from Alison Borthwick and Director of Maths:

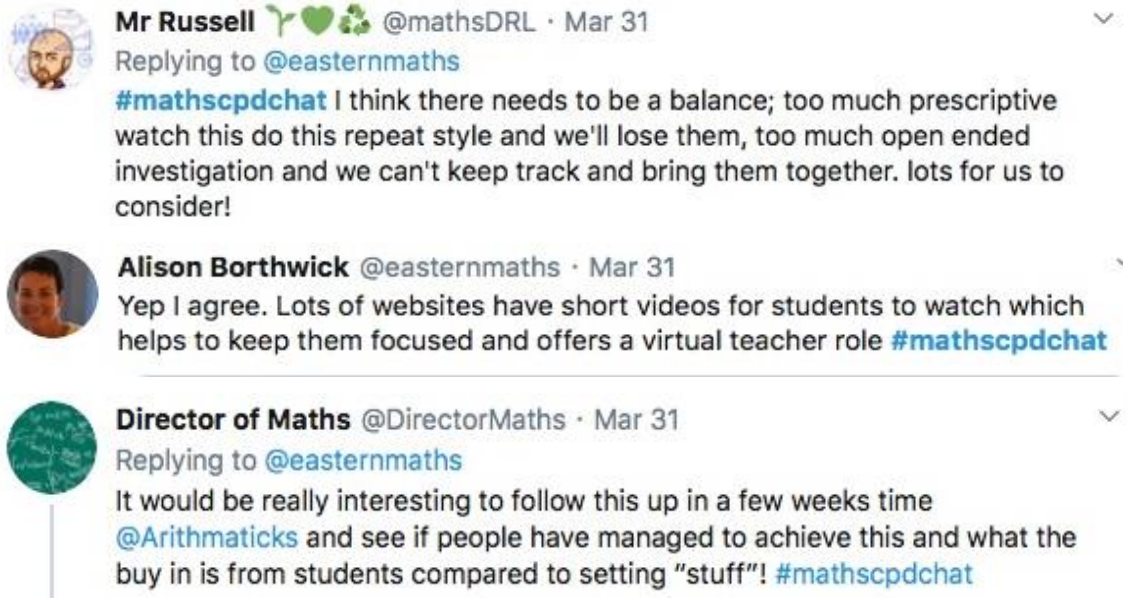




these from Kathryn Darwin, Director of Maths and Alison Borthwick:



and these from Mr Russell, Alison Borthwick and Director of Maths:



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

Among the links shared were:

Arithmaticks on YouTube which is Kathryn Darwin's new YouTube (growing) collection of videos in which she works through examples to illustrate answers to questions that students might ask, such as 'Can graphs be used to solve a quadratic equation?' It was shared by Kathryn Darwin

Support for maths learning and teaching during school closures which is a new part of the NCETM website. It has been set up in order to help teachers and other maths educators keep maths learning going while children and teenagers are at home. It was shared by Mary Pardoe

Extra support during school/college closures which is a new package of free resources from MEI to support remote mathematics teaching. It was shared by Catherine van Saarloos

Blutick which is a new, well worth exploring, free website to support the teaching and learning of the UK 11-16 mathematics curriculum. It was shared by Alison Borthwick

links to the websites that contributors to the discussion have been using during the first two weeks of school closures

Integral: supporting teachers in and out of the classroom which provides thousands of teaching and learning resources covering the whole mathematics curriculum. It includes tools for tracking the progress of students, and a ‘Learning Walkthrough’ on the first page that you see. It was shared by Mr Russell

MathsWatch which is an online maths platform that adapts to any screen size (‘looks consistently good on mobiles, tablets and desktops’). It includes ‘videos, online assessments, feedback tools, independent learning, printable worksheets’ and an ‘innovative marking tool’ … intended ‘to help develop your students’ mathematical skills’. It was shared by Mr Russell

DrFrostMaths: supporting schools during Covid-19 closures which is a new page of drfrostmaths.com providing guidance for teachers who wish to use material on the site for ‘distance learning’. It was shared by Mr Russell

Corbettmaths videos in each of which a teacher uses an example to demonstrate a mathematical relationship or procedure. It was shared by Mr Russell

BBC Bitesize on which ‘daily online lessons for all ages’ will be published, starting on Monday 20 April. It was shared by Laura McIntyre

Don Steward: mathematics teaching 10 - 16 which is a popular collection, compiled, designed and attractively presented by Don Steward over several years, of interesting starting points to prompt and support the learning of much of the mathematics that is presently taught to pupils in Key Stages 2 to 4. It was shared by Richard

White Rose Maths which is a source of substantial and wide-ranging secondary-school maths teaching resources and Continuing Professional Development. It is all provided by a team of teachers who are ‘working to transform the teaching of maths and make change happen in our schools’. It was shared by Hannah

EzyMaths which is a GCSE Maths digital teaching platform that ‘provides a wealth of video and assessment resources, covering the AQA, Edexcel and OCR exam board syllabuses’. It was shared by Mr Hawes Maths

Hegarty Maths which is a website for students and teachers in which the material (more than 600 lessons and more than 40,000 questions) is presented ‘in a carefully sequenced, scaffolded and connected manner’. The teacher can set particular students personalised work, and view students’ answers, scores and comments. It was shared by Maths Faculty

Mathsbox which is a website providing ‘4000 ready to use resources for busy teachers (Key Stage 1 to A level)’. The resources include skills checks, games, multiple-choice quizzes and collections of questions with examples, hints and solutions. It was shared by Matt Man

Premier League Primary Stars for Families which is a ‘wide collection of free, curriculum-linked resources to educate and entertain children at home’. It was shared by Martyn Yeo