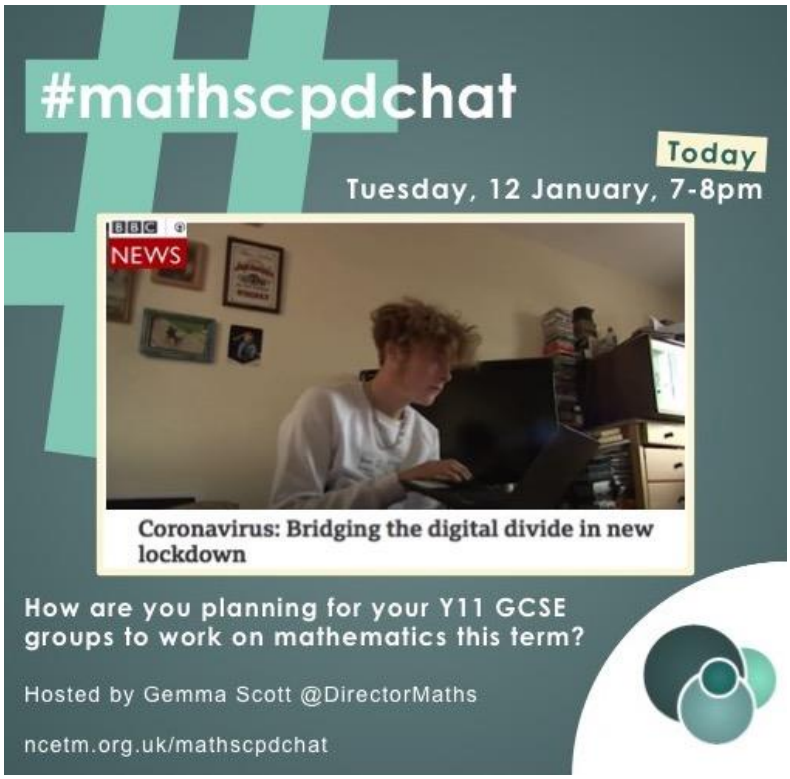
# #mathscpdchat 12 January 2021

**How are you planning for your Y11 GCSE groups to work on mathematics this term?**
Hosted by Gemma Scott

*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:

**planning this term's curriculum for Year 11 students:**

- the majority of contributors to the chat **have not changed their existing 'normal' plans**;
- most teachers are feeling that they 'have a duty to get the kids to the level they need for their next steps' **regardless of how GCSE grades will be awarded this year** … many feel that they need to teach in such a way that learning maths is 'comforting among the chaos' … they are 'keeping going like exams have not been cancelled until we know what is happening';

- a ‘concern’ for some teachers is **the need to make appropriate decisions now about which students to enter for the Higher tier maths GCSE and which for the Foundation tier** … for example a contributor wrote ‘I’ve just done my tiers and was a little more optimistic than I usually would be’;
- Year 11 students in some schools have not yet done any **GCSE maths mock exams** … some teachers are ‘teaching as normal and preparing for mocks post half-term if we can’ … that believing they will soon be doing mock exams is giving students ‘something to aim for in the shorter term’;
- some schools have arranged, as normal, for there to be a **Year 11 parents’ evening** very soon during January;
- some teachers would welcome an opportunity to teach Y11 students ‘some useful mathematics rather than merely cramming for GCSE’ … some are considering moving to **a Core Maths curriculum** with some Y11 groups … that those students will still be working to acquire GCSE maths skills and knowledge ‘but feels different and more useful’ … some other teachers would like to ‘focus on **a financial maths scheme of work** come May/June’;
- for some teachers the topics that they have left, yet to be addressed with Y11 students, **do not all lend themselves well to remote teaching** … for example, ‘one of the topics left is box plots, and while I can draw them using *Desmos*, it’s not quite the same as drawing them on paper’;
- some teachers commented that the Y11 students who are in ‘top sets’ have been working hard, but **in other groups (sets) ‘engagement has been an issue’** … **‘it’s the ones who feel they have “already failed” who are going to be hard to reach’** … teachers have been communicating with parents, ‘making it really clear that every day counts from now on’ … **using online individual whiteboards, and ‘giving lots of verbal feedback’ will hopefully help them [the students] experience success during ‘remotely taught lessons’**;
- it may be easy for teachers to forget that, although for teachers this is not a normal Year 11, it is never a normal school year for students ‘because the GCSE year is different to anything most of them will ever do again’ … that **teachers appearing to be unduly worried by uncertainty about GCSE arrangements might influence students’ attitudes negatively, and unnecessarily** … that students need stability more than ever at the moment;

**key messages that teachers are conveying to Year 11 students:**

- ‘keep going and working as hard as you would normally’ … that, generally, students are responding well … teachers sense that students ‘know things are up in the air at the moment’, but that **this group of students (all those presently in Year 11) have developed – have needed to develop – unusual resilience** … these students still

**believe that their attainment will be assessed this year in some valid way**, so they 'still want to impress/work hard' … these students see the value of their day-to-day work probably more clearly than do Y11 students normally because they think that it may significantly affect judgements that determine the GCSE grade they are awarded;

- some teachers, **having told GCSE students to carry on as if they were going to do the exams**, have been impressed by the fact that, so far this term, **they are all 'turning up and completing work'** … that it is important for students to know/understand that students and teachers 'are on this journey together';
- a newly-qualified maths teacher, who is new this year to her Year 11 students, commented that **'they seem more motivated to prove themselves to me now I will have a say in their grades'**;

**what 'revision' will look like this term:**

- that revision is effective when it is **'seeing things differently, second time around … seeing the maths from a different perspective … in a different context'** … that revision involves 'examining how deep your knowledge is', rather than 'just doing the same thing over and over again';
- some teachers are presently generating 'revision' only as a part of 'starters' in lessons, and in one homework per week, as they would do in normal years … that it is **crucial to 'strike a balance' between trying to generate so much revision that some students don't do any because it is 'too daunting' and others 'crumble trying to do too much', and not providing any revision opportunities** … that getting this balance right is particularly important at this time when students have less-than-usual pastoral support;
- some teachers commented that **'revision' is always built into every lesson in all year groups anyway** … for example, by providing (as described in the scheme of work) 'do-now' tasks addressing learning from the last lesson, last week, last month, last term, last year, … … …;

**managing online lessons for Year 11 students:**

- assessment for learning (AfL) has been facilitated by arranging for each student to use an **individual online whiteboard**;
- that pre-made **'*Desmos* lessons' enable instant feedback to and from students, which in turn enables the teacher to identify and address misconceptions** … using such lessons is prompting some teachers to look into creating their own '*Desmos* lessons' … that support from the AMSP (Advanced Mathematics Support Programme) for ways of teaching effectively with *Desmos* has been 'amazing' (link provided below);
- many teachers are **'loving using graphics tablets'** … for example, 'using *Screencastify* and a graphics tablet to pre-record some lessons, means I can use the lessons I would have used in classrooms, writing on screen in same way I would have on a smartboard' (link provided below);

- several **particular websites that provide student tasks** were mentioned … links to them are provided below;

**awarding Centre Assessment GCSE grades:**

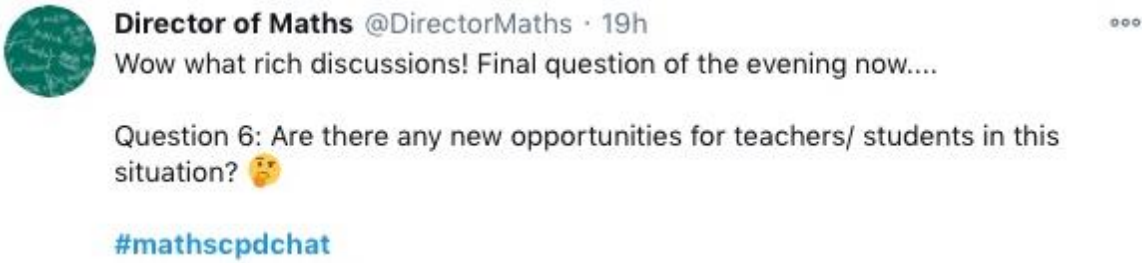
- some teachers are keen to know **what will constitute valid evidence** for their judgements … and how results will be **standardised** … guidance as soon as possible would be appreciated by them;
- other teachers will be happy to 'cross that bridge when I get to it' … they are **presently focusing on what they can control now … for example, 'striving to teach as best I can'**;

**new opportunities offered to teachers and students by the present circumstances:**

- some teachers feel that they have 'a perfect opportunity' to **work on effective presentation of ideas** … and their **students can learn how to be more independent** in their learning;
- present circumstances are motivating teachers to **develop expertise in using technology to enhance learning** … teachers are **working together** to explore 'tech ideas' … for example, some maths departments are meeting every two weeks 'to try things out and teach each other';
- some teachers are seeing how particular aspects of technology and applications, such as breakout rooms, can encourage students when working online to **talk about their mathematical thinking, share ideas and collaborate to solve problems**;
- many teachers are creating resources to support online learning, such as videos, that will be **kept as permanent resources to be used again** in future 'normal' times in various ways, for example, as revision aids or when students or teachers are absent from school.

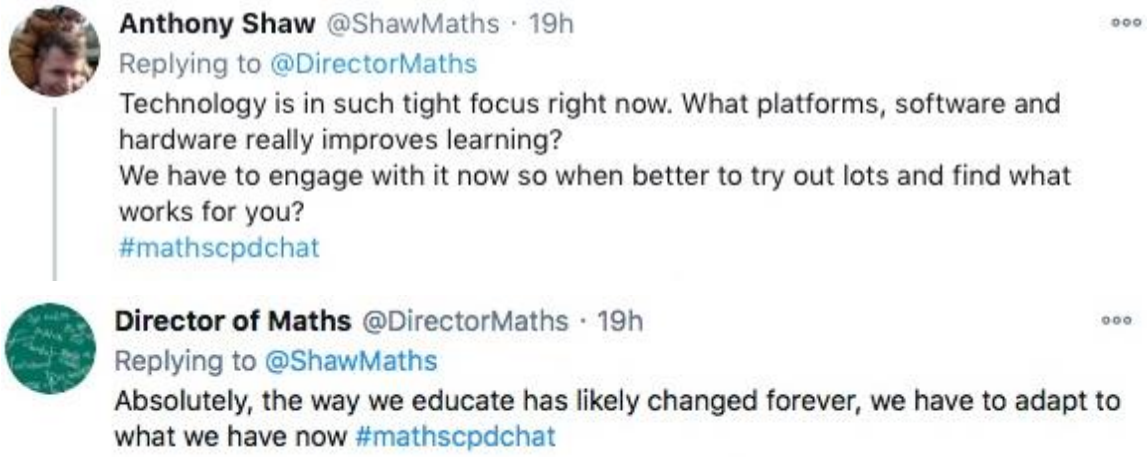
In what follows, click on any screenshot-of-a-tweet to go to that actual tweet on Twitter.

This is a part of a conversation about how the present circumstances have prompted, and provided opportunities for, both teachers and students to improve their existing skills and develop some new ones. The conversation was generated by this tweet from Gemma Scott:

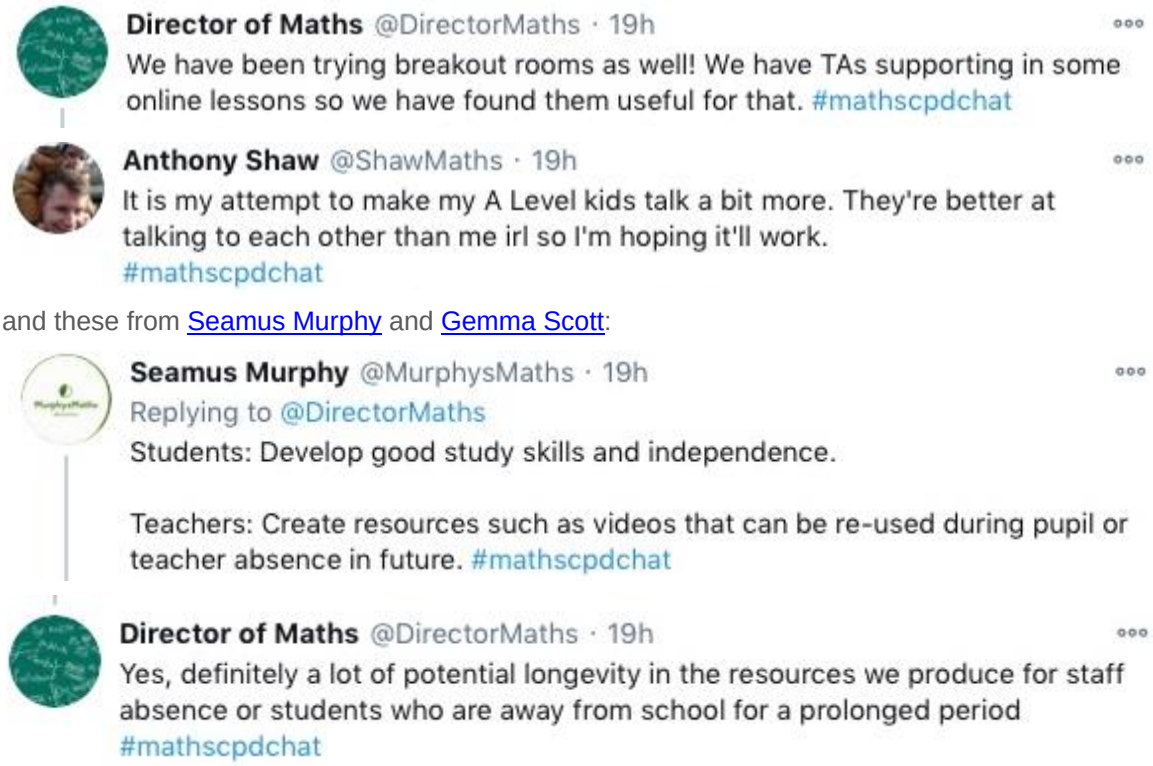



and included these from Tan S, Kathryn Darwin and Simon Ball:


these from Anthony Shaw and Gemma Scott:




these from Gwen Tresidder, Gemma Scott and Anthony Shaw:




and these from Seamus Murphy and Gemma Scott:




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

Among the links shared were:

Whiteboard.fi which is a free whiteboard tool for teachers and students. Every student gets a digital whiteboard where they can draw, write text, make notations on images, write algebraic expressions, and so on. The teacher can see all the students' whiteboards in real time, while each student sees only their own whiteboard and the teacher's. It was shared by Kathryn Darwin

Teaching with Desmos which is an online course from the AMSP (Advanced Mathematics Support Programme) designed to demonstrate how to use this free dynamic graphing software effectively to help deepen students' understanding of maths. It was shared by Miss Ward-Gow

[Copy of] Introduction to Desmos which is a Desmos program by Charlotte Hawthorne and Nichola Sowinska that provides 'a few little things to give you an idea of what Desmos can do'. It was shared by Nix

Graphics Tablet UGEE EX07 which is a YouTube review of a graphics tablet which includes a link to a site where it could be purchased. It was shared by Kinza Barrett (Mason)

Teaching financial maths which is a very useful categorised collection from Catherine van Saarloos of many excellent resources to support learning financial maths. The categories include Books about finance, Pay (including tax and NI), Mortgages, Inflation, and so on. It was shared by Anthony Shaw

King's Maths School: Outreach - for Teachers, *Teaching a 'top set' in KS4: success now, success later,* which is a series of seven online professional development sessions provided by the King's Maths School, London. It was shared by Mary Pardoe

DrFrostMaths which is a very popular site that provides an online learning platform, teaching resources, videos and exam questions, all for free. The teacher is able to see students' responses to tasks in real time, and therefore provide instant feedback with no time-lag. It was shared by Anthony Shaw

Learning by Questions (lbq) which is a website providing Question Sets that can be used to support online learning in three different ways (in 'Teach Mode', 'Ad hoc Mode' or 'Self-Paced Mode'). Each set of maths questions (for Key Stages 2 to 4) addresses a key objective from the National Curriculum or the White Rose Maths curriculum breakdown. It was shared by Kathryn Darwin

Free ATM Resources which consists of a very wide range of interesting free resources from the Association of Teachers of Mathematics. It includes a selection of tasks taken from the ATM publication, *Preparing for GCSE problem solving: developing reasoning through thinking mathematically*. It was shared by Mary Pardoe

Student Problems From The Mathematical Gazette which contains interesting problems from the Mathematical Association (originally published in the column 'Student Problems' which began in 1992 in the Mathematical Gazette) for students to try to solve! It was shared by Mary Pardoe

GCSE Maths Formulae quiz which is where you will find quizzes, each containing 20 multiple-choice questions designed to test students' knowledge about using formulae that feature in mathematics at GCSE level. It was shared by Miss Ward-Gow

PixiMaths which are free maths teaching resources from Key Stage 2 to Key Stage 5, including revision materials for the GCSE and IGCSE. It was shared by Mr P

MathsWatch which are short videos providing teacher-explanations of mathematical procedures and relationships. It was shared by Miss Ward-Gow