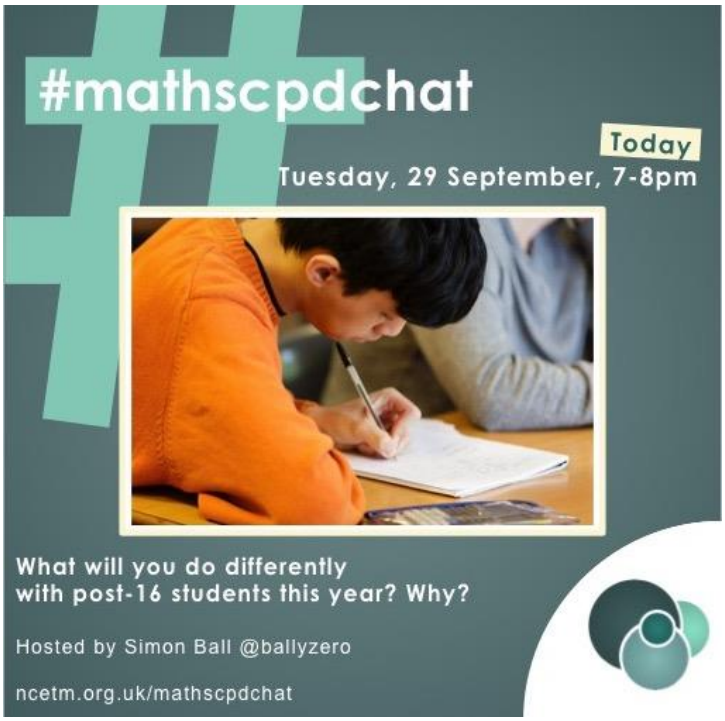
#mathscpdchat 29 September 2020

What will you do differently with post-16 students this year? Why?
Hosted by Simon Ball

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 focused were:

how teachers of post-16 students have changed their maths-teaching practice this term:

- now **teaching students in the classroom and at home (via Teams) at the same time** … for the first time ever;
- **using a visualiser in all lessons** 'almost exclusively' and 'my modelling of solutions is far closer than ever before to how I like them to be set out';
- that there is a **far wider attainment range than ever before in GCSE resit classes**, with students who are retaking GCSE at Foundation and Higher levels learning together in the same class;

- now helping A level students **apply their previous knowledge 'outside the domains they were taught it in'** in order to try to 'plug any gaps from remote learning' last term;
- **stressing to students that every test and homework may count towards their 'exam' grade** because their grades might be based on continual assessment rather than on an actual exam;
- in case his teaching has to 'go fully online' in the future, at least one teacher is **spending much more lesson time than ever before 'delivering content'** rather than having students adopt investigative approaches or spend time 'consolidating and practising';
- at least one teacher feels that he is doing 'better explaining' and 'worse assessing of learning' because he **believes that his students may be overestimating what they know and can do**;
- teaching A level maths this term **after a break of several years**;

whether teachers have changed the order in which they teach topics:

- in order to support students' skills in communicating mathematical arguments, at least one teacher has **moved working specifically 'on proof' to the start of his students' A level course**;
- at least one teacher is **devoting more time than usual at the start of her Year 12 A level course to coordinate geometry and algebra** because, owing to lockdown, the students haven't worked on those ideas in school for a long time;
- some teachers who would **normally start Year 13 A level content during the last few weeks of Year 12 do not intend to do that this year** … they want to see firm foundations established during the students' first A level year;

whether teachers have made any small changes to the way they teach particular topics:

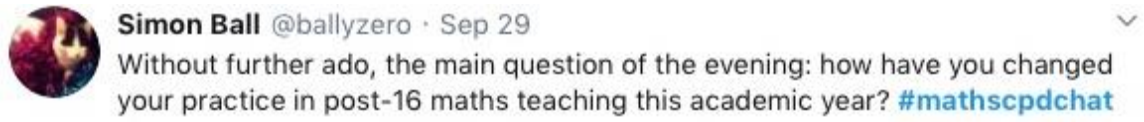
- teachers feel that it is important to wean post-GCSE students off the idea that the variables when relationships (functions) are represented on Cartesian graphs have to be x and y, with x shown on the horizontal axis and y on the vertical axis … getting students **accustomed to thinking generally about independent and dependent variables**;

whether teachers feel that this term they are needing to adopt different-to-normal approaches to behaviour management and general interaction with students:

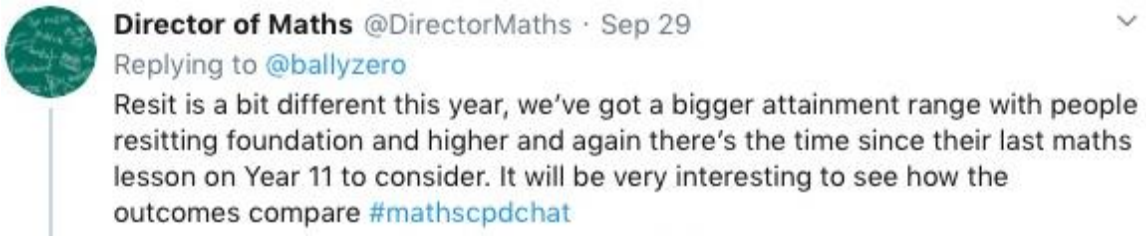
- that Year 13 students in particular are needing 'lots of reassurance', but that they have **become better-than-normal independent learners** … students are better at 'diagnosing their own weaknesses', and are more resilient … they are better than students in previous years at 'doing as much as they can' and knowing 'how and when to ask for help' … this is probably owing to the fact that much of their Year 12 learning was done at home in response to remote teaching;
- that the start of this academic year has shown teachers that in their present teaching **'it's a case of accept and adapt for the time being at least'**.

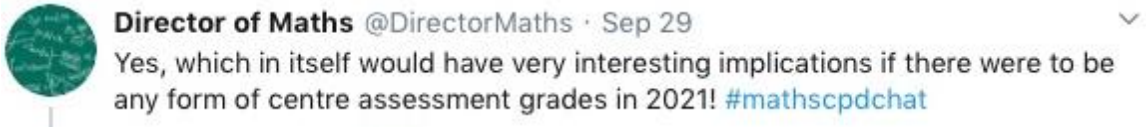
In what follows, click on any screenshot-of-a-tweet to go to that actual tweet on Twitter.

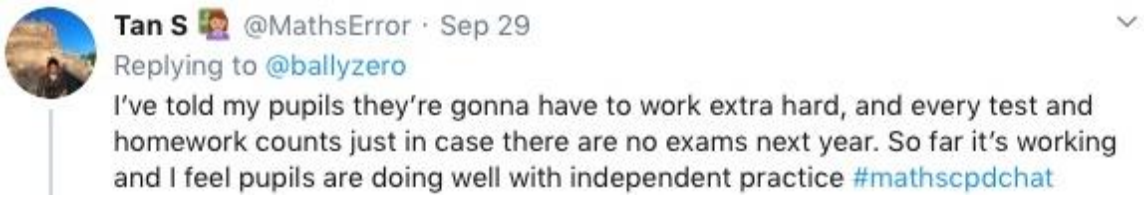
This is a part of a conversation about what teachers are doing differently this term … with an eye on the uncertainty of present times! The conversation was generated by this tweet from Simon Ball:



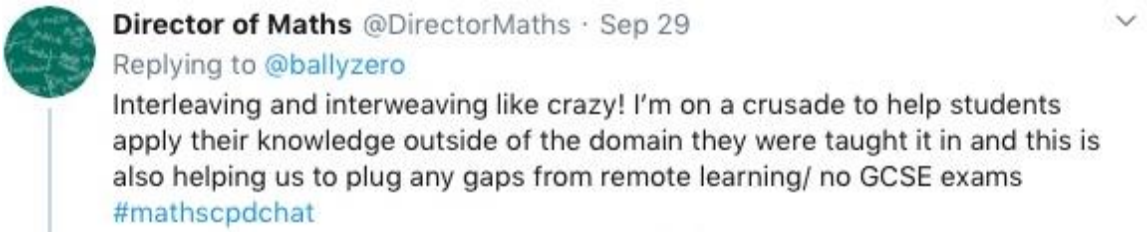
and included these from Director of Maths, Simon Ball and Tan S:







these from Director of Maths and Simon Ball:



Director of Maths @DirectorMaths · Sep 29

Of course! Today looked at points of inflection so looked at sketching curve shapes, solving inequalities to find concave/convex sections, selecting a differentiation rule and then later solving ln and trig equations. Fewer examples but deeper #mathscpdchat

Simon Ball @ballyzero · Sep 29

That's beautiful - pulling things together in a really rich and meaningful way! #mathscpdchat

and these from Mr Hoad, Mary Pardoe and Simon Ball:

Mr Hoad @MrHoadMaths · Sep 29

Replying to @ballyzero

Content content content.

(just in case)

Mary Pardoe @PardoeMary · Sep 29

Interesting ... what 'normal practice' (what you would do normally) is that a change from?

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Mr Hoad @MrHoadMaths · Sep 29

More of an active focus on content delivery in lessons at a slightly higher pace than I would have done in the past.

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Mary Pardoe @PardoeMary · Sep 29

OK ... but what, other than content delivery by you, would normally also have been going on in lessons?

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Mr Hoad @MrHoadMaths · Sep 29

In lesson consolidation and practise. Probably a more investigative approach than I am using this time round.

We already have strong assessment/feedback and interleaving cycles which will continue. But I would have moved to that if we didnt have it already.

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Simon Ball @ballyzero · Sep 29

Replying to @MrHoadMaths

So, content, then? 😂 Is that in case you have to go fully online in the future? #mathscpdchat

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

Among the links shared were:

Integral Maths which is a website providing all-round support for the teaching and learning of A level mathematics. It was shared by Kate Hogan

Advanced Mathematics Support Programme which is a government-funded initiative, managed by MEI. It aims to increase participation in Core Maths, AS/A level Mathematics and Further Mathematics, and improve the teaching of these level 3 maths qualifications. It was shared by Mary Pardoe

Year 12 Pure which is a blog by Jo Morgan in which she lists recommended resources for teaching Pure Mathematics in Year 12 (based on the **2017 A level specification**), categorised by topic. It was shared by Jo Morgan

A Level Maths 2017 which is a collection (compiled by RobotMaths) of files containing information about the A level mathematics requirements of every exam board. It was shared by RobotMaths

Large Data Set Materials which is a collection (compiled by RobotMaths) of large data set material that might be used in the teaching and learning of any post-16 mathematics, including in Core Maths. It was shared by RobotMaths