

#mathscpdchat 02 June 2020

How do you plan to organise Y7 maths groups in September, given this year's unique circumstances?

Hosted by [Director Maths](#)

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



#mathscpdchat
TONIGHT - Tuesday, 2 June, 7-8pm



Photo taken in February 2020

How do you plan to organise Y7 maths groups in September, given this year's unique circumstances?

Hosted by @DirectorMaths
nctm.org.uk/mathscpdchat

Some of the areas where discussion focused were:

how **present Year 6 pupils** are grouped for maths:

- the results of a **poll** set up by the host were as follows:
'How do you group Year 6 for maths in your school?'
'ability sets': 43.4%, 'mixed-attainment groups': 35.8%, 'other': 20.8% ...
the 'other' category included ... 'two parallel bands each with an 'extended' top set'

and two equal 'semi-mixed-attainment' sets' ... 'in semi-mixed-attainment groups with one other group of pupils who require special support' ... 'in mixed-attainment groups for three days a week, and setted on Monday and Friday';

- that having **moved to teaching Year 6 pupils in mixed attainment groups**, some primary teachers are starting to see that it is having a **positive impact** on pupils' learning, demonstrated, for example, by the increased confidence with which most pupils now approach maths lessons;
- that some **large primary schools** have chosen to **set pupils for maths** in Year 6;

how secondary teachers plan to group new **Year 7 pupils in September**:

- in **mixed-attainment classes for the first two weeks**, then **sorted into attainment sets on the basis of a test**, the items of which are devised by teachers to be similar to questions on past Key Stage 2 test papers ... some teachers will use questions from past 'Common Entrance' 11+ and 13+ papers ... other teachers will use the AQA baseline test ... teachers feeling that, in the absence of Key Stage 2 tests this year, **finding/devising ways of adequately carrying out 'baseline' assessment of Y7 pupils in September will be more important than in normal years**;
- in **Form (Tutor) groups initially before using the school's own 'baseline test'** to sort pupils into **attainment sets** ... that the 'content' of teaching during the 'initial' time is planned to be accessible to all pupils (with any prior experience-of/attainment-in mathematics);
- that when Year 7 pupils are organised into attainment sets during the autumn term, it is important to **review the setting, and make appropriate set changes, regularly**;
- pupils are **set right at the start of Year 7** on the basis of judgements passed on from their Year 6 teachers (which, for example, consist of categorising pupils as 'working above level ...', 'working at level ...' or 'working towards level ...') ... these judgements are then 'firmed up' by giving pupils a test ... Year 7 teachers' views that 'it is valuable to meet regularly (online) with primary numeracy leaders';
- this year some schools are planning to organise Year 7 pupils into **one 'top set', with all the other groups as mixed-attainment groups**;
- **teaching Year 7 pupils in mixed-attainment groups throughout the year** for the first time ever ... some teachers are worried that they have not yet developed skills that will enable them to cope with the large attainment ranges in mixed attainment classes, 'because even in setted groups the attainment range is large' ... some teachers are re-planning their Year 7 SoL (Scheme of Learning) to 'suit' mixed-attainment teaching;
- in some schools where the teaching is in mixed-attainment groups throughout Year 7, pupils are **tested during the first term in order to identify those who 'will**

require targeted support' ... establishing a '**nurture group**' consisting of pupils who are withdrawn from mixed-attainment groups ... that the teaching in a Year 7 '**nurture group**' is slower (than in the mixed-attainment groups), and focusses solely on numeracy and some topics that are selected from the SoL that all other pupils follow ... that in some schools '**nurture groups**' may be taught during '**tutor time**' with the help of Teaching Assistants;

- in other schools **no pupils are withdrawn from mixed-attainment lessons** ... instead small '**nurture groups**' are taught '**extra maths lessons**', with the help of Teaching Assistants, outside the times of normal timetabled maths lessons;
- in some schools the **SEN (Special Educational Needs) team** '**deliver**' **catch-up maths lessons** to some Year 7 pupils ... in addition, throughout the whole of Key Stage 3, '**Form time**' is used once a week to tackle specific difficulties that pupils are having in maths ... for example difficulties with aspects of '**basic**' arithmetic;
- some teachers start every Year 7 '**nurture group**' lesson with fifteen minutes during which pupils try to **answer (approximately 40) 'quick questions' from an online website**, and the pupils '**get well excited**' if they answer at least half of the questions correctly ... that it is a '**nice behaviour routine**' for the start of each lesson ... that '**nurture group**' lessons are '**a completely different kind of lesson to any other**';
- in some mixed-attainment groups '**weaker**' **pupils may ask to sit with 'pupil mentors'** who they use as a check before asking the teacher for help ... this helps to remove from weaker pupils the fear of '**being wrong**', and helps them to feel that '**it is okay to struggle**';
- some teachers feel that they '**aren't adequately trained**' to teach '**nurture groups**' in Year 7 ... other teachers (with some experience of teaching such groups) advise teachers to teach whatever they will be able to teach other groups in one lesson, but to expect to spend two or three lessons on it ... and to **be patient, trusting that the 'nurture group' pupils will also get there** ... some schools have created their own '**key skills booklet**', designed to help weaker pupils '**build a repertoire of skills**' that they can apply when they are working on any mathematics;
- in some schools Year 7 pupils do '**standardised tests**' at the end of every half-term ... records of how they perform in these tests contribute to the whole continual process of monitoring pupils' progress;
- some teachers are planning '**booster maths clinics**' (to offer '**remotely**' in **September**) to parents and form tutors who are not maths teachers with the aim of enhancing their maths knowledge ... that such sessions may help the people who attend them contribute to closing '**gaps**' in pupils' learning that have resulted from

several months of home-schooling ... addressing the lack of confidence that is often expressed in statements such as 'I'm no good at maths, so I can't help';

- that in whatever way teachers intend to group pupils in Year 7, a current challenge is deciding **how to adjust existing Year 7 Schemes of Learning in order to accommodate unusual learning 'gaps' that may have occurred this year** ... secondary teachers need to work with their feeder primary schools ... transition tasks (n.b. the [summary of the #mathscpdchat discussion on 19 May](#), which was about Y6/7 transition);

moving to **mixed-attainment teaching throughout Year 7:**

- that **in this unique year** learning maths in mixed-attainment tutor groups may be particularly **helpful to Year 7 pupils in their forming of friendships and building confidence**;
- that there are many UK schools in which Year 7 maths teaching and learning has been in mixed-attainment groups for some years ... maths teachers in **those schools can offer support and guidance (link provided below)**;
- that in mixed-attainment groups, rather than providing different tasks for different pupils, it is effective to present **tasks with which all pupils can engage in some way** ... expecting pupils to **engage differently with the same task**, drawing on different prior learning, and acquiring new understanding and knowledge appropriately ... when tasks are selected/devised carefully, differentiation occurs naturally within each task ... establishing a good **balance between 'instructing'** (e.g. demonstrating procedures, providing 'worked examples', ...) **and facilitating** (e.g. careful questioning/prompting, inviting pupils to explain their methods/thinking, ...);
- that **teaching Year 7 pupils in mixed attainment groups** is likely to **help those pupils who struggle with maths or lack confidence** ... in mixed-attainment groups they don't 'see a ceiling on what they can achieve' ... they have opportunities to surprise themselves ... a challenge in mixed-attainment teaching is **ensuring that higher attainers are constantly moving forward**, gaining deeper understanding rather than coasting ... presenting tasks that can be addressed in greater depth by some pupils than by others;
- **questions/uncertainty about how mixed-attainment teaching is 'done well'** ... for example, whether it is necessary to group pupils by attainment within mixed-attainment groups ... that grouping by ability in a mixed-attainment class defeats the purpose of not setting ... using pupil-pupil discussion skillfully in mixed-attainment groups within mixed-attainment classes rather than grouping pupils by attainment ... that all pupils can engage in problem solving;

- that teachers **need to be well prepared to move from teaching pupils in attainment sets to mixed-attainment teaching** ... that it is about embracing a new approach ... that implementing mixed-attainment teaching in a school is a process, not an event;
- in some schools in which Year 7 pupils learn maths in mixed-attainment groups the Year 7 Scheme of Learning is structured under contextual themes, such as **'Codebreaking', 'The Egyptians', 'Islamic Patterns'**, that enable pupils to **work on a variety of mathematical ideas and procedures within each theme**;
- that in mixed-attainment teaching effective teachers **use variation very thoughtfully and carefully** in task design, and they enable pupils to acquire **good mathematical-behaviour habits** (such as those summarised as 'Reflect, Expect, Check, Explain');
- that success in mixed-attainment teaching has resulted from **collaborative planning sessions** involving everyone who will be teaching whatever is being planned ... using time in departmental meetings to **share and discuss experiences, strategies and materials**;
- that, in all teaching, including mixed-attainment teaching, **careful and continual observation** enables the teacher to identify and provide timely supportive/remedial intervention;

information from primary schools that would help secondary teachers make Year 7 pupil grouping decisions:

- that it would be helpful to have some idea of the **topics recently addressed by Year 6 pupils** both in school and during home learning;
- **information about individual pupils' attainment in maths during Key Stage 2** ... to help teachers challenge and support pupils appropriately at the start of Year 7;
- **information about pupils' attitudes to learning** ... e.g. where engagement has been consistently poor or exceptionally good ... where home circumstances are difficult ... information about particular friendship groups;
- **mock KS2 test scores** if they exist ... or other standardised test scores ... teacher assessment records ... list of pupils in rank order of prior attainment;
- examples of **teaching approaches in KS2** ... e.g. manipulatives and representations used;

how secondary teachers plan to assess pupils at the start of Year 7:

- an **online, or paper, test** that provides standardised age scores and tests a range of competencies;
- an **online test**, consisting of a mental-maths test followed by a set of approximately 30 questions covering a range of topics ... the outcomes of which are then used to create a **report on the strengths and weaknesses of each pupil**;

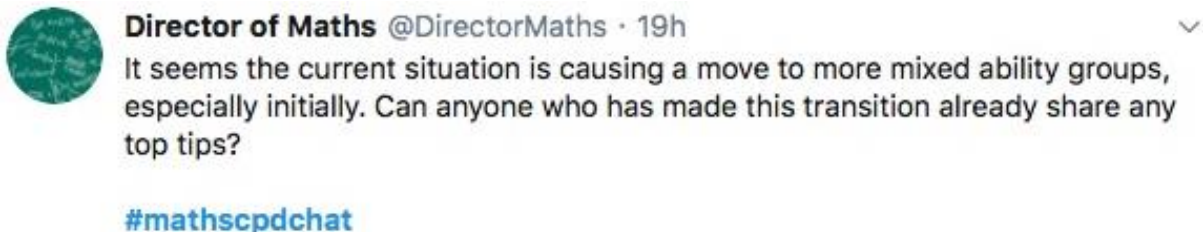
- **'diagnostic assessments'** in order to 'enable us to start Year 7 with 'content' that is based on where pupils are in their mathematical learning rather than on the fact that they are in Year 7';

whether the **current situation has prompted changes to Year 7 pupil-grouping policies:**

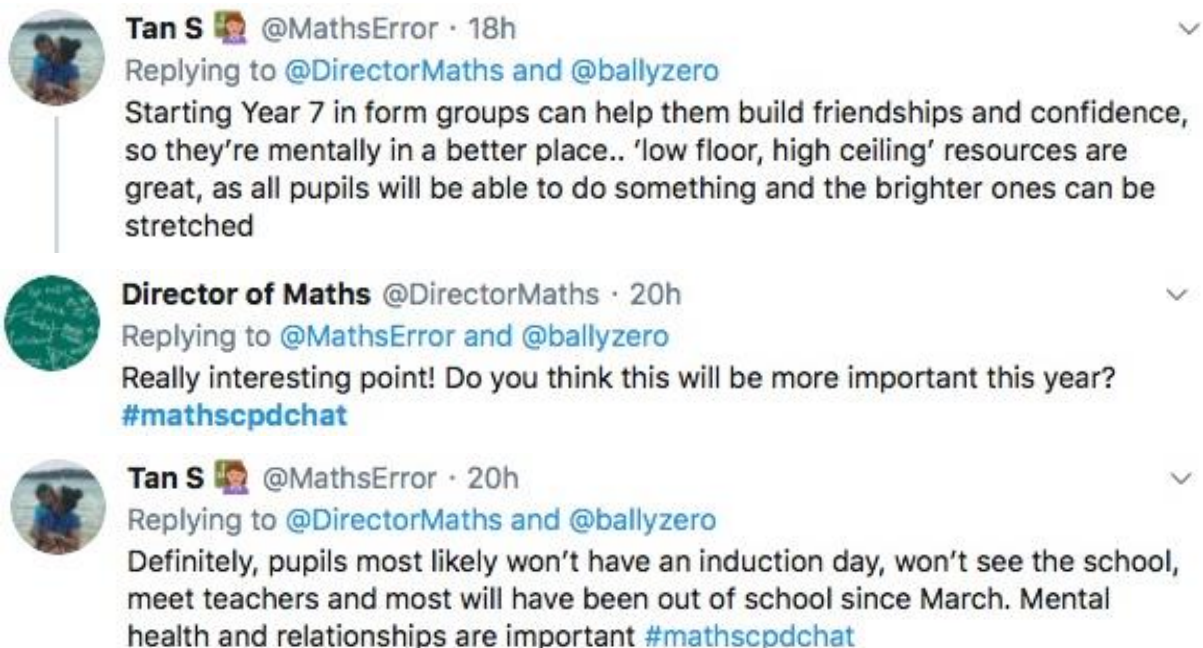
- that the lack of information about individual pupils, compared with that of previous years, has caused teachers for the first time to consider **moving to mixed-attainment teaching throughout Year 7** ... that this change is likely to benefit pupils;
- that the current circumstances have provided **more time**, than in 'normal' circumstances, for teachers to ... **work together** ... **read widely** ... **consider research findings** ... gain deeper understandings and develop new skills that will facilitate mixed-attainment teaching.

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





This is a part a conversation about moving to mixed-attainment teaching in Year 7. The conversation was generated by this tweet from [Director Maths](#):



and included these from [Tan S](#) and [Director of Maths](#):



these from [Carleen Masson](#), [Director of Maths](#) and [Joelle](#):

-  **Carleen Masson** @carleen_masson · 17h ▼
Replying to @DirectorMaths
We have ks3 as mixed ability this year. Has its pros and cons. Biggest challenge was making sure there was support for lower students so they don't get left behind.
-  **Director of Maths** @DirectorMaths · 17h ▼
Do you think staff will be more confident going into the second year?
[#mathscpdchat](#)
-  **Carleen Masson** @carleen_masson · 16h ▼
Yes, i think we have learnt a lot this year. But still have some lessons to go on making sure the lowest don't slip through the net
-  **Joelle** @MinsterMaths · 14h ▼
Replying to @DirectorMaths
We have mixed ability in year 7 and next year it will be in year 8 as well. For us the success so far has been collaborative planning sessions. All techniques are agreed in advance and have to consider all abilities. Having someone linked to the mastery programme helps.

and these from [Chantelle Dyson](#), [Mrs Number Nerd](#), [Director of Maths](#) and [Helen Hindle](#):

-  **Chantelle Dyson** @ChantelleDyson · 18h ▼
Replying to @DirectorMaths
We've designed our SOW to have overarching themes, a kind of like was towards primary. We start with codebreaking, move on to The Egyptians, Islamic patterns and the like.
The concept is to intertwine more open ideas and interesting problems and activities.
-  **Mrs Number Nerd** @MrsNumberNerd · 18h ▼
Replying to @DirectorMaths
AFL is really important as well as developing independence in my opinion. Structured discussions can be helpful. We have students that begin a task with different starting points rather than different tasks. I've been learning more about mastery which works well with mixed groups
-  **Chantelle Dyson** @ChantelleDyson · 21h ▼
I also fully appreciate how scary this seems to people. "They don't do the same thing?!" Well yes and no, but I am very much shifting from being teacher and instructing all the time to a balance between teacher and facilitator
[#mathscpdchat](#)
-  **Director of Maths** @DirectorMaths · 21h ▼
Really interesting point! Where do you see the distinction between the two?
[#mathscpdchat](#)



Chantelle Dyson @ChantelleDyson · 21h

Teacher, delivery of specific learning, methods and introducing topics, direct instruction I suppose.

Facilitator, drawing out their understanding, prompting with questions, providing low threshold, high ceiling tasks that have multiple entry points for exploration.

[#mathscpdchat](#)



Chantelle Dyson @ChantelleDyson · 21h

Replying to [@ChantelleDyson](#) and [@DirectorMaths](#)

Can't say we've got it perfect at all, it's very early days and continuous and ongoing improvement as ever. A mixture of SOW development and staff adjustment and adaptation, finding our feet with it all. That's the concept though and we're getting there (1/2) [#mathscpdchat](#)



Helen Hindle @HelenHindle1 · 16h

Replying to [@DirectorMaths](#)

Have you seen [#MixedAttainmentMaths](#) there are lots of schools out there who can offer support and guidance in this and also free annual conferences mixedattainmentmaths.com mixedattainmentmaths.com/mixed-attainme...

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

Among the links shared were:

[Mixed Attainment Maths](#) which is a website created to enable teachers of mixed-attainment maths classes to share resources and ideas. It was shared by [Helen Hindle](#)

[Barnsley Academy Y 6/7 transition booklet](#) which is a booklet for present Year 6 pupils who will become Year 7 pupils at Barnsley Academy in September. It contains information about mathematics teaching at the school, some writing about famous mathematicians and some maths tasks for pupils to do on their own or with their families. It was shared by [Miss H](#)

[The misallocation of students to academic sets in maths: A study of secondary schools in England](#) which is a research report published in the *British Educational Research Journal* in August 2019. It compared the actual set-allocations of 9301 Year 7 pupils with the set allocations that would have existed if the allocation had been based solely on pupils' prior attainment at the end of Year 6. It was shared by [Mary Pardoe](#)

[Learners' attitudes to mixed-attainment grouping](#) which is a research report published in 2019. It is an analysis of the attitudes of students of different attainment levels to mixed-attainment grouping in mathematics and English. It was shared by [Mary Pardoe](#)

[Best Practice in Grouping Students](#) which is a summary of a research project about ways of grouping school students for learning. It was conducted from 2014 to 2018 by researchers from University College London and Queen's University Belfast. It was shared by [Mary Pardoe](#)

[CanDoMaths ArithmeQuiz 3](#) which is a bank of very many tests that contain questions similar to questions in Key Stage 2 arithmetic tests. It was shared by [CanDoMaths](#)

[Boys Don't Try - The Podcast](#) which is a collection of podcasts in which Matt Pinkett and Mark Roberts discuss issues that they highlight in their book 'Boys don't Try?'. It includes a discussion about boys' attitudes to setting. It was shared by [Alice Coates](#)

[GL Assessment](#) which are Progress Tests in Maths that might be used as a contribution to the process of identifying gaps in pupils' learning. It was shared by [MrHawesMaths](#)