

The Nottingham TMMAG 2-side Guide

Why do it? What are the benefits?

- Clear evidence from our assessment to show lower third of attainers making more progress under TMMAG than setted. (Setted was also taught using Mastery principles). “Tail” of lowest 1/3 of achievers which previously decreased to almost 0%, decreased much more slowly and levelled off at approx. 20%. Highest achievers at the same levels as before.
- Positive mindset from students – no more “Which set are we Miss?” and much less “I’m rubbish at Maths...” or “those other kids must be better than I am.....”.
- Positive attitude and language from staff when discussing students and groups.
- More “mathematical behaviour” seen in all groups as the lower attaining students can listen to and learn from higher attaining students – lots of teachers in class.
- It puts the emphasis on learning not assessment. T can ‘enjoy being surprised’
- All students have the opportunity to be exposed to all the teaching and all the content
- Behaviour – there are no “sink” groups with lots of poor behaviour – if there are any bad combinations they can be easily moved. Keep working on/tweaking seating plan.
- Grouping/timetabling is much easier – particularly important this year to keep students in “bubbles”
- Staff can more easily collaborate on planning and sharing ideas, resources, what worked.

What would I say to ‘terrified of Derby’?

- It’s not that different to “normal” good teaching – it requires a slightly altered approach but it’s no more work and the benefits are huge. T feels like they are learning too.
- Much more rewarding - you can really get into enjoying the maths with the class. The best thing to do is borrow a lesson from somewhere and try it (even with a “set”)

How do I do it? What fundamental principles help me teach TMMAG groups?

- A firm belief from staff that all students can learn and make progress, no matter what their starting point is. Comparison vs SELF to see progress not vs others to gauge status/rank.
- The above understanding in the classroom with the students – classroom ethos – all sensible responses are valid and give food4thought – we do not laugh – we trust – supportive atmosphere – reciprocal responsibility for each other’s learning.
- It requires a much more open, discursive, reasoning/problem solving teaching style

What strategies do I use which I didn't used to?

- Open questions. Being mathematical ≠ being fast. Praise trying for clear explanation.
- How many ways..? Answer often given in advance.
- Discuss in your pairs... Collaboration, reasoning, checking, struggle and mistakes.
- “Claire says...(insert common misconception) - why is she wrong?”
- Whiteboards – used differently – much less quick fire show me, show me, more thinking done on whiteboards – followed by discussion of ideas: Plenary often
- Slower pace generally. Train kids to talk well: Add, Build, Challenge, always listen.
- Fewer closed questions answered – less time on worksheets
- Pupils may choose own starting points on ramped Q sets

How the hell do you differentiate for the full range of attainment?

- Always have a challenge question/s following any short time of independent work
- Use representations to scaffold for lower attainers

- Ask lots of **why** questions – even the highest attainers can struggle to explain some concepts clearly, asking why makes them think hard. Emphasise sentences & mathematical language
- Underlying (unspoken?) assumption that 99% of students with good explanations and guided practice can “get it” and make progress in the lesson. For lower attaining students, retention/prior knowledge may not be as strong - addressed through retrieval practice.

What is it NOT? What misconceptions do I think some people have about TMMAG?

- The teacher has to run around teaching students individually
- You need to provide 100 different worksheets!
- You teach to the middle
- There is no teaching (eg with SMP booklets)
- You group the students into mini sets within the classroom – red table etc

What things do I definitely think people should not do?

- All of the above!
- Try to teach in the same way as setted groups – ie lots of closed questions and assume they can all keep up
- See TMMAG as a magic cure-all for every issue in maths teaching, it’s not.

How do you make the transition to TMMAG? Where to begin?

- Observations of other teachers doing it was crucial in the beginning – get as many teachers out to see it as possible (difficult at present?)
- “Borrow” lessons to see how they are structured differently – we looked at the <https://bluecoatmaths.com/> ones in detail
- Get your department on board – sell it to them
- Spend time discussing it – we did a series of CPD sessions to think about it in detail and to help build confidence among the team
- Start with year 7 only

Crucial aspects of support?

- We have written centrally planned lessons to save time and also to ensure the lessons are good quality. This has helped to support the staff teaching it to know what sort of thing we are after and how to do it (and how not to do it.)
- Keep checking in with staff and discussing anything which come up.
- Make sure SLT are aware and on board
- Deal with parents...! We began with Yr6 open evening, changed prospectus: Inform early.

Where to look for suitable resources?

<https://bluecoatmaths.com/>
<https://donsteward.blogspot.com/>
<https://mathsvenns.com/>

<https://whiterosemaths.com/>
<https://www.openmiddle.com/>
<https://nrich.maths.org/>

Things we have not got answers for yet/still working on?

For us homework is not cracked yet – we use HegartyMaths and normally set one task for the whole class – however this is not right for a mixed group. We are experimenting with optional tasks, but no answer as yet.

Progress through SoL feels gradual – need to cut some content....

We still separate sets at y10 for H vs F. Maybe we can delay longer in time...not sure