

## ***EMAT Maths Teaching Policy.***

After analysis of the calculation policies used by academies in EMAT, it was decided that the varied maths results was more a matter of approach rather than content.

Through consultation with maths leaders in all the academies across the Trust, a practical and manageable teaching policy for all our Academies has been designed to support raising standards. This will support leaders ensure maths is taught effectively.

Like all policies, it is a working document and will be improved over time. The policy is to be seen as a non-negotiable by all staff in the trust.

- School maths philosophy  
We understand that maths is a skill necessary for the rest of our lives. Therefore we believe that Fluency, Reasoning and Problem Solving go together, and as such are taught together. Pupils are encouraged to solve maths problems using a variety of skills taught during maths lessons, as well as using cross-curricular opportunities too.
- What we will typically see in and around the school  
We expect to see calculations and problem solving opportunities around the school, either in displays or via verbal interaction with all staff. Classrooms will be rich with maths examples and carefully explained vocabulary that match the current focus. Pupils are taught to be independent learners using the learning environment to support them.

- How do we track progress and attainment?

We use a variety of assessment systems; for instance: Pixl, Pupil Asset, PITA, Development Matters. These will *support*, **not** replace, teacher assessment. Formative assessment is used to guide teaching focus; summative assessment is used to track progress and attainment over time.

- Use of intervention, Challenge and stretch

Carefully identified intervention is used to support and challenge ALL pupils to ensure they achieve their full potential- this includes those pupils working at greater depth.

***We focus on the following at the 'class level'***

1. Positive learning Environment. (*working walls, current vocabulary, manipulative equipment (up to, and including year 6), focussed examples, positive learning behaviour*)
2. Effective questioning. (*This is to investigate deeper understanding and misconceptions*)
3. Feedback. (*This can be verbal or written as appropriate. However this is delivered though, it MUST provide clear, focussed and achievable next steps in pupil's learning that can be monitored. In order for this to be successful, pupils need to have sufficient time in order to engage with these next steps*)
4. Depth of understanding, not speed of coverage. (*Making sure pupils really understand a concept, not just follow a sequence or algorithm*)
5. Differentiation/challenge for all. (*Stretch ALL pupils from their starting point*)
6. Accurate and effective assessment. (*Forensic analysis of strengths and weaknesses, so that we can plan next steps*)
7. Carefully identified Intervention. (*led by trained support staff and teachers*)
8. Planning to include elements required to teach effective lessons allowing **ALL** pupils to access the learning. (*The gold standard= vocabulary, progress for all, reason/ problem solving, misconceptions, conceptual understanding*)

***Peter Howard. July 2018.***

**Key NUMBER Skills by Year Group.**

End of reception	End of Year 1	End of Year 2	End of Year 3	End of Year 4	End of Year 5	End of Year 6
Count in unison to 100	Count in multiples of 2's, 5's and 10's	Count in steps of 2, 3 and 5 from 0.	Count in tenths.	Count over boundaries (backwards and forwards) TO HTO ThHTO Decimals	Order decimals with up to 3d.p.	Order fractions including those greater than 1.
Write 0 to 10 correctly	Recognise numbers to 100 (read and write)			Count backwards through zero into negative numbers.		
				Round a number to the nearest 10, 100 or 1000. Round decimals (2d.p.) to the nearest whole number.		

Understand addition and subtraction in practical situations	Recognise and understand the symbols +, - and =	Add TO to TO by partitioning.	HTO+TO mentally HTO-HTO written		Add decimals mentally	Select which method to use to solve a calculation (mental, jotting, written) and justify choice
Know that a number represents a given amount	Recall number bonds to 10 and 20				Mental addition by adding multiples of 10 then correcting	Multiply by 19/21/49/51 by association and rounding then correcting
	Understand place value of tens and units				Use and apply addition and subtraction skills to £ and p	
		Recall and use multiplication and division facts for the 2,5 and 10 multiplication tables.	Recall the 3, 4 and 8 times tables at speed	Recall, at speed, all times tables up to 12x12 and associated division facts	Apply times tables to multiples of 10, 100 etc	Apply times tables to decimals

				Know factors and factor pairs	Prime numbers to 20. Know square and cube numbers. Common factors, common multiples, prime factors and composite numbers.	
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		Write simple fraction(e.g. $\frac{1}{2}$ of 6 = 3) and recognise equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ .	Know half of 1, 3, 5, 7, 9 and apply this to tens and hundreds AND to evens e.g. half of 27.	Fractions equal to decimals	Fractions = Decimals = Percentages	Find percentages of quantities.
	Read time to O' Clock and half past	Read time to the quarter to and quarter past.	Read a.m. and p.m. on a digital clock.	Read time on analogue and 24 hour clock.		
Say days of the week and months of the year	Know the order of days of the week and months of the year.	Know there are 7 days in a week, 52 weeks in a year and 365 days in a year.	Know how many days in each month and leap years. Apply all date facts to simple problems.			
		Name simple 2D shapes.	Identify right angles within shapes in various orientations.	Use a ruler accurately with mm	Use a protractor	

