Maths Mastery for Everyone:
Top Tips for Supporting Children with SEND in Inclusive Classrooms

Learning collaboratively has been proved beneficial for all children, including those with Special Educational Needs and Disabilities (SEND). Evidence suggests that teaching all pupils together in mixed prior-attainment groups helps to close the achievement gap and ensure all children progress at a more similar rate. In the majority of primary schools, teachers work with a range of children with varying needs.

Mastery teaching aims to develop a community of mathematical thinkers. In this type of classroom, teachers facilitate learners in supporting and challenging others' ideas and building an ethos of respect. Children learn together even with their differing needs. So how do we ensure that our classrooms are equitable? How do we ensure we cope with the variety of needs without developing exhaustion? How do we decide on which adaptations will be most beneficial?

The good news is that, often, what works for children with SEND also works for those without, so no longer do we see the need to differentiate in multiple ways, preparing multiple tasks and worksheets. Adapting the way we teach can help support all our learners. Below is a compilation of top tips from many of the Maths — No Problem! blogs which have been written to support teachers of children with SEND. Some of the suggestions you might already be using in your classroom, but some might be new to you. Perhaps you might find something to help you deliver even more impactful lessons and for your learners to develop a deep, connected understanding of mathematics.

The Top Tips below are ideas which could be used in the classroom to support children with various types of SEND. Those needs might include English as an additional language (EAL), speech, language and communication needs (SLCN), dyslexia, dyspraxia and dyscalculia.

Difficulty: Language including everyday language, mathematical vocabulary, following instructions, decoding and comprehension skills

Top Tip	Why this can help
Share an image and ask 'What do you notice?' or 'What's the same and what's different?'	• Low stakes; everyone can have a voice. • Allows for exploration of maths before calculations are introduced.
Read the text together as a class or read it to the children. Then identify which words or phrases might be tricky for them to understand. Discuss the context.	Develops a clearer understanding of the language and the situation.
Read, talk and read again.	Allows time for children to visualise the context.
Look in advance at the vocabulary needed for the lesson. The Maths — No Problem! online teacher guide has a language section for each lesson.	Ensures the teacher is aware of the language to be taught and pre-empts any tricky or new language.
Create a word mat with just a few of the new words for the lesson and add in picture cues and mathematical symbols.	Helps children remember and practise the relevant vocabulary for the lesson.
Pair children carefully taking behaviour, prior attainment, oracy and personalities into consideration. Provide opportunities in the lesson for collaboration.	Develops confidence, resilience and a positive mindset.
Give concise instructions one at a time. Use unambiguous language.	Allows children to complete one instruction before thinking about what comes next.
Repeat instructions – not continuously, but with space in between for children to internalise and visualise what they have to do.	Gives thinking time and allows the child to remember and keep track of what they are supposed to do.
Ask children to repeat the instruction or information.	Ensures you know what they have processed.
Give tick lists for children to tick off instructions that have been completed, one at a time.	Helps children focus on what is next.
Give children processing time after asking them a question. Allow around 10 seconds. Alternatively, you can ask them the question and then come back to them for an answer.	Allows processing time.
Use sentence starters to scaffold answers or explanations such as 'I worked out the answer by ...' 'First we ....' These can be found in the online Maths — No Problem! teacher guide. Sentence starters can be printed and stuck in books, on the wall or placed on tables.	Supports children in forming full sentences and explaining their thinking.
Model the language you want to hear.	Ensures children understand the vocabulary in context.
Play maths games to reinforce new mathematical language. Maths — No Problem! includes Activity Time opportunities, which match the learning objectives.	Allows time to practise key vocabulary in a fun and meaningful way.

Difficulty: Mathematical concepts and structure

Top Tip	Why this can help
Use concrete manipulatives and pictorial representations in lessons. Maths — No Problem! states the resources needed for each lesson in the online teacher guide. Ensure you have enough for every child to use.	• Exposes the structure of the maths. • Helps learners retain information in their long-term memory. • Helps children make connections.
Draw a bar model with the children to represent the question. Maths — No Problem! often includes bar models in its approach to teaching problem solving.	Helps children to understand the question in a visual way.
Ensure the school's curriculum takes a spiral approach – where concepts are revisited and built upon. The Maths — No-Problem! programme is constructed in this way.	• Helps learners retain information in their long-term memory. • Helps children make connections.
Take time to regularly stand back and observe pupils as they work. Identify misconceptions and how to address them. Teachers are expected to observe and assess learners during the opening Explore task in Maths — No Problem!	Helps teachers to discern what pupils need next to ensure they are secure with their understanding.
Teach children to mark their own answers after completing each question.	Enables children to query their process and make corrections, try again or seek help as needed. Marking after each question allows children to develop a deeper understanding of where they may have gone wrong, compared to marking at the end, by which point they may have forgotten the process that led to their answer.
Encourage children to look back at previous work or their textbooks for examples covered in earlier lessons. Maths — No Problem! encourages regular 'journalling' where students are prompted to record their thinking in relation to concepts covered. It also provides clear examples throughout the textbooks, which pupils can refer back to at any point during a lesson.	Helps children to remember their thinking processes and methods for different contexts and concepts.
Link maths to real-life contexts. Maths — No Problem! provides many such contexts in each lesson.	Ensures that maths has a purpose and that it becomes meaningful for the learner and easier to visualise.
Use visual images such as dot cards, dice or 10 frames to develop subitising skills. Subitising skills allow learners to instantly recognise the number of items in a small group without counting them one by one.	Develops instant recognition of the number of items.
Play with number bonds up to 10 using concrete manipulatives. Help children to see the connections between the bonds.	Helps to develop a secure understanding of number sense.
Encourage estimation and question children on whether they think an answer is reasonable or not.	Helps children question whether their approach and answer make sense and puts them in a good position to spot mistakes.
Put importance on finding connections and relationships between the mathematical structures.	Helps develop depth of understanding and reduces the load on working memory.

Difficulty: Concentration and memory

Top Tip	Why this can help
Strategically place children away from distractions – consider seating arrangements and displays.	Lessens distractions and allows more focus.
Minimise the number of facts the child needs to recall – refer to the Number Facts Fluency Overview in the Mathematics Guidance for Key Stages 1 and 2.	Supports working memory and recall.
Teach a variety of methods and ask children which one they prefer and why. Support them in moving from inefficient methods by breaking down why they are struggling with a more efficient one.	Gives children autonomy over their most efficient method and supports them to move on.
Focus on conceptual understanding (understanding the concept) rather than procedural (remembering the process or 'trick').	Develops a deep understanding of the concept rather than a method which might not work with all scenarios or might be forgotten.

Difficulty: Physical

Top Tip	Why this can help
Consider offering pencil grips, rulers with handles and writing slopes. Consider doing practical maths on the floor.	Supports fine or gross motor skills.

Difficulty: Confidence

Top Tip	Why this can help
Praise the effort and process rather than the answer. Develop a growth mindset in the classroom where children feel safe to explore and discover things themselves.	Raises self-confidence and ensures children 'have-a-go' without worrying about getting a wrong answer.
Pre-teach the key concept, the method and/or the language.	• Children feel more confident in the lesson. • Allows teachers to ask for contributions from those children. • Raises their status in the class.
Be consistent about the approaches to teaching maths; the Maths — No Problem! textbooks and online teacher guide can help with this as the lesson structure provides stability.	Avoids stress as children know what to expect in a lesson.
Avoid time pressure wherever possible. Provide regular opportunities for children to work on one problem in depth rather than rushing through many different questions.	Gives learners time to develop an understanding of a problem and time to try out their ideas.

Which of these techniques have you tried and which ones have worked for you?

These Top Tips have been collated from other Maths — No Problem! blogs including:

- **Everyone Can Explore: Supporting access for all learners**
- **Teaching children with dyspraxia**
- **Supporting learners with SLCN in the classroom**
- **Supporting Dyslexia in the maths classroom**
- **Overcoming obstacles for maths learners with dyscalculia**

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