

SEND Guidance for Maths

One of the core beliefs of the teaching for mastery approach is that, with the right support, all pupils are capable of achieving well in maths. We scaffold children to up to achieve the ambition of our curriculum, not differentiate learning down to their perceived needs or level of ability. If we are getting our teaching right for these children, we are getting it right for everybody. We are very familiar with this mantra, as it has been how we have worked for a number of years now, but what does it actually look like in practice?

There are some elements of how we teach everybody that will be of extra benefit to those children with SEND. However, for some children, in some lessons, extra scaffold and targeted support will be required. Whilst schools will have comprehensive SEND policies in place, in this document, we will explore a little of what that might look like specifically in maths, including considering the use of additional adults.

How does a mastery approach make our curriculum more accessible to children with SEND?

- Curriculum Design - Small step, granular learning
- Lesson Design – Reactivating prior learning; explicit modelling; learning together and embracing the power of talk; small, coherent steps within a lesson; chance to independently practice and lock in new learning; reflection to lock in new learning into long term practice
- Daily Practice – to interrupt the forgetting, and ensure that facts and procedures are learnt to automaticity
- Use of Manipulatives – used by all pupils to support conceptual understanding
- Consistent use of models and images – making new concepts more accessible
- Working walls - to record key learning
- Mixed ability pairings - lesson mainly taught with children grouped by chemistry, not ability – who will learn well with who, rather than who is most closely matched in ability though these things are necessarily mutually exclusive, care is taken to ensure those children who find learning maths the hardest are not paired together
- Reduction of cognitive load – ensuring that displays, presentations and working spaces aren't overly cluttered, creating a distraction from the key learning.
- Language structure – new vocabulary explicitly introduced and consistently used; stem sentences and generalized statements to add clarity to key points of learning

What specific support might be offered to support children to access lesson?

- Worked examples – that take children step-by-step through methods or procedures
- Manipulatives – whilst these are used for all to develop conceptual understanding during the earlier parts of the lesson or teaching sequence, some children may benefit from using these for longer, including whilst doing independent work
- Extra resources – times table charts, number lines, hundred squares – specifically chosen to support with gaps in knowledge that may prevent children from accessing the learning in a lesson
- Pre-teaching – mini-sessions before the lesson to prime the children for the learning that they are about to engage with.
- Intervention groups – not solely for children with SEND, but designed to be as timely and as responsive as possible to help children to keep up with the curriculum, and not allowing them to fall behind.

How should additional adults be deployed in maths lesson?

- Additional adults should be explicitly planned for at each stage of the lesson. Deepening questions and support prompts and clues for all activities should be shared by the teacher in advance
- Be aware of, and near to, children who may need support, but not glued to them. It is vital that they encourage independence in learning wherever possible.
- Offer quick additional support or input to children who need it, then move on. Give children time to do what they've been asked, rather than building an over-reliance
- Circulate the room, giving clues to and prompting children
- Be an assessment for learning tool throughout the lesson – checking for which children need support and what misconceptions are occurring
- Be in regular communication with the teacher to report back on all of the above
- Model and record for the teacher where appropriate
- Use an 'ask, don't tell' approach to supporting learners

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Curriculum Specific adaptations

All of the following adaptations are subject specific and therefore should be considered additional to the high quality first teaching, which should be in place for all lessons:

Cognition and Learning		Communication and interaction	
Barriers	Provision	Barriers	Provision
Information may not be understood or retained	<ul style="list-style-type: none"> Consider the accessibility of maths demonstrations. Plan the demonstration area so that it is clearly laid out, uncluttered and gives all children a clear view. Use the working walls and whiteboard to show the focus of each lesson and how it fits in the sequence of lessons. How do lessons link together to develop their mathematical knowledge. Use symbols, images or objects to make it more accessible. Review the key knowledge from the lesson and identify on the working/enquiry wall. Prepare the children prior to the lesson with a pre-teach introducing key knowledge/vocabulary 	Understanding and using mathematical vocabulary	<ul style="list-style-type: none"> Recognise that the language of maths may be challenging for many children – for example: The specific mathematical use of everyday words such as ‘fractions’, or terms specific to maths, such as ‘fractions of quantities’. Pre-teach key vocabulary, then ensure multiple and regular exposure to these words including referring to knowledge organisers and make them clearly visual in the classroom environment. Provide flashcards with key vocabulary Check children’s understanding by inviting them to reformulate explanations in their own words or in other ways. For example, after a key concept has been introduced, ask children to explain what they key points using diagrams, as well as explaining it orally or in writing. Use vocabulary flashcards and prompts. Use real objects as a starting point for developing the concepts and the language needed to describe and discuss their learning. Give children time to think about answering questions
Memory/ consolidation skills	<ul style="list-style-type: none"> A visual framework can also be used as a consistent guide for planning an investigation in maths. For example, headings of what am I finding out? What I need? What will I do? What to look for? What happened? Each with picture support will simplify the method, results and conclusion format for many children. Encourage the use of mind maps/pictures/school organisers to scaffold. 	Anxiety	<ul style="list-style-type: none"> Consistency of approach reduces children’s anxiety - it allows children to predict what will happen. Provide an overview of the lesson elements so the children knows what is coming, pre-teach the child some of the elements of the lesson etc.
Difficulties impacting eyesight, hearing, movement, touch etc.	<ul style="list-style-type: none"> Label new equipment and processes to help develop vocabulary. Use overlays or enlarge the font. Consider ventilation and positioning of children. 	Participation/safety/ practical work	<ul style="list-style-type: none"> Consider carefully the groupings – prepare the children by ensuring they are aware of the group they will be working in. You may need to specifically teach the skills of cooperation and interaction for practical work. When organising a practical session consider: <ul style="list-style-type: none"> - how you establish investigation routines - the level of supervision needed - consider the resources available – does there need to be close supervision? Do some resources need limiting? - how will resources be organised in the classroom – from a central point or at the table? - how the task can be broken down into manageable steps and the best way to present any instructions e.g. some children prefer diagrams, others a checklist.
Sensory processing difficulties	<ul style="list-style-type: none"> Pre-teach showing/experiencing anything that may have sensory implications. Ask for specialist advice on equipment for children with particular SEND. Consider where the child is sat in the class. 		