

Barriers to and solutions for Engagement, Progress and Achievement in Maths

- Safety and risk assessments should be in place for use of manipulatives with children's behaviour/sensory needs eg mouthing, in mind
- Use of word banks support understanding of **new vocabulary** for **all children** **Frequent repetition of subject language**

	Hearing Impairment	Visual Impairment	Dyspraxia (fine/gross motor)	Memory/processing	ASC/ADHD	Speech and language	Cognition and Learning	SEMH
Barriers identified by SENCo/Class teacher	<ul style="list-style-type: none"> • Difficulty in hearing instructions • Vocab • Managing practical investigations/interactions • Filtering noise to hear what is important • Difficulty not knowing subject vocabulary. • Group work / paired work hard to access. 	<ul style="list-style-type: none"> • Reading • Navigating classroom • Managing resources and equipment • May struggle with contrasting colours on the board 	<ul style="list-style-type: none"> • Managing physical resources particularly "fiddly bits" such as small counters • Difficulty recording • Difficulty following the organisation of charts or reading of data from a graph. • Difficulty measuring accurately and using a ruler to draw accurate shapes or diagrams. • Difficulty using a protractor 	<ul style="list-style-type: none"> • Recall of instructions • Remembering key facts and vocab • Retaining focus • Remembering number facts or multiplication tables 	<ul style="list-style-type: none"> • Attention span. • Fine motor skills • Managing physical resources particularly "fiddly bits" • Difficulty recording • Concentration span • Safety regarding impulsive behaviour • Difficulties sharing • Difficulty accepting they are wrong or that there is a quicker method. 	<ul style="list-style-type: none"> • Understanding instructions • Memory of subject specific words • Explaining their view in mathematical terms • Abstract words- such as mass, height, distance may be hard to understand. 	<ul style="list-style-type: none"> • Understanding concepts • Recording • Retaining information • Memory of subject specific words and definitions • Memory of number facts • Memory of previous learning which is required at a higher level- eg shape names or knowledge of division facts needed to simplify fractions 	<ul style="list-style-type: none"> • Making links to prior learning • Resilience/fear of failure. • Poor view of self as a mathematician.

Maths



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Solutions Identified by subject co-ordinator, SENCO, Class teacher	<ul style="list-style-type: none"> • Positioning in classroom. • Visuals Pictorial representations. • Vocab lists and explanations/ maths dictionaries so words can be revised. • Task planners, bar models, whole part diagrams to support understanding visually. 	<ul style="list-style-type: none"> • Positioning • Pre-experience/pre-teach. • Enlarged texts • Extra support / checking • Speak directly to child. • Peer support (vary the peer) • Use adult/peer to support if outside. 	<ul style="list-style-type: none"> • Adapted equipment eg digital scales. • Alternative ways of recording • Support with measuring and ensure pupil can use equipment • Writing and speaking frames • Support for written tasks or reduced recording • Adult used to draw charts etc and child completes 	<ul style="list-style-type: none"> • Pre teaching where possible and catch up. • Visual representation / what to do in pictures. • Visual clips • Well prepared resources/ mind map etc • Peer support • Writing and speaking frames • Same form of diagrams eg bar model • Allow time to answer – at least 10 seconds. • Manipulatives readily available • Key words with a visual reminder displayed. • Maths songs 	<ul style="list-style-type: none"> • Ear defenders if needed. • Additional equipment if they need to work alone. • Drawing and labelling to show understanding. • Sentence starters. • Repetition of stem sentences. • Support turn taking. • Step by step instructions • Movement breaks • Assess risks – eg certain smells or noise sensitivity • Oral discussion and questions used for assessment if written work incomplete • Writing and speaking frames 	<ul style="list-style-type: none"> • Step by step instructions with visual clues • Key vocabulary pre-taught and recapped regularly with visual prompts • Key works on display • Definitions for subject words – especially where they are easily confused with everyday words- eg table translate. • Ensure understanding. • Drawing and labelling to show understanding • Writing and speaking frames • Allow time to answer 	<ul style="list-style-type: none"> • Revisit prior learning • Pre-teach and post teach • Ways of recording – cloze label diagrams, record, pictures • Writing and speaking frames • Hovering of adults to ensure support is given as soon as needed. • Scaffolded support (I do it, we do it together, you do it) • Racks of manipulatives allowing easy access to small equipment • Frequent pit stops to check understanding 	<ul style="list-style-type: none"> • Revisit prior learning. • Ways of recording – cloze label diagrams, record, pictures • Praise • Careful grouping /supportive peer. • Specific roles in group/pair work to suit strengths.