

# Inclusive support series: maths difficulties

Use this strengths based tool to identify reasonable adjustments in learning settings (not all the strategies will be need to implemented at one time).

## Copy to:

- Inclusion team
- Class team
- Parents

Name:

Class:

Date:

Completed by:

## Number sense

	Focus on strengthening simple number concepts first through repetition and overlearning, e.g. sorting/grouping, recognising more/less, subitising, counting objects with 1:1 correspondence
	Use standard and non-standard dot patterns for subitising and partitioning
	Use practical tasks and concrete manipulatives to build sense of number and quantity
	Fluency building activities and games to improve recognition of number and quantity
	Use number lines to develop understanding of magnitude, e.g. whether child can accurately represent the number on a number line
	Regular opportunities to practice mental maths skills and number fact knowledge (e.g. using games like pairs, snap, Hit the Button)

## Metacognition

	Encourage reflective talk in the classroom
	Model thinking aloud
	Teach the self-talk child needs to plan, monitor and evaluate their learning
	Activate prior knowledge – encourage the child to think back to what they already know from home and school experiences
	Encourage the child to revisit previously learned knowledge/skills before building upon this

Please ensure that these strategies are implemented consistently.

## Using methods

	Support the child to trial different methods
	Ask the child why they chose their method and reflect on others that could be used
	Provide worked examples and model tasks step-by-step
	Build fluency in following key methods to reduce cognitive load

## Conceptual understanding

	Check prior knowledge to ensure the next concept taught is developmentally appropriate
	Introduce topics using concrete hands on materials (e.g. counters, Dienes rods)
	Provide resources such as number squares, number lines, number tracks, bead strings, metre rule
	Ensure concrete manipulatives are available beyond KS1 and into KS3 as required
	Move through concrete to pictorial and then abstract (symbolic) representations of number/concepts, with modelled examples at each stage
	Make maths concepts real and relevant by linking them to everyday life
	Be explicit about connections between concepts/topics
	Observe the child when they are working to identify misconceptions
	Encourage the child to talk through their thinking/reasoning
	Address misconceptions with tasks that allow the child to prove their thinking wrong
	Ensure opportunities for the child to work regularly with class teacher
	Build links between content of lessons and content of any maths interventions



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## Visual-spatial skills

	Use books with larger/thicker/darker squares to aid organisation of work
	Adapt layout of learning materials, e.g. greater spacing between items
	Colour code visually similar symbols (e.g. +/x) if child struggling to discriminate between them
	Reduce the need for unnecessary copying using printed materials
	Differentiate between copying and drawing tasks and use photocopies, tracing paper etc to avoid tasks that are too difficult
	Model use of visuals and ensure the child understands how they are relevant and can be used to solve a problem
	Use headed columns for place value
	Use arrows to explain direction of computation

## Language

	Explicitly introduce and define mathematical terms, revisiting them regularly
	Draw attention to the multiple words used for symbols like +/-
	Link maths vocabulary to everyday life examples
	Teach maths vocabulary alongside related activities
	Highlight key mathematical information in word problems
	Provide clear and simple instructions
	Give sentence stems/starters to help the child explain their answer

### Consider:

- How long each adjustment has been in place?
- What impact is it having?
- Is this still the right adjustment? (i.e. have things changed or is it ineffective)
- Is it being used consistently? (by all in contact with the child)

## Working memory

	Show the child how to break down multi-step problems and focus on one step at a time
	Provide step-by-step instructions to solve problems (written, pictorially)
	Acknowledge the challenges of holding everything in mind and teach child to jot down key information to keep track of problems
	Provide sufficient thinking time
	Support the child to develop fluent recall of number facts to reduce cognitive load during calculation
	Repeated retrieval of number facts in a little but often approach to help encode information in long-term memory
	Regularly revisit recently learned concepts and methods to aid retention
	Interleaved learning – practice new skills alongside secure ones
	Use small/manageable numbers to introduce new concepts
	Use uncluttered learning materials/ worksheets, cover distracting information

## Anxiety

	Give recognition for good learning strategies, rather than ability at maths
	Model making mistakes and how to work through them
	Value mistakes and don't interrupt working to prevent an error
	Focus on task understanding not task completion
	Encourage the child to positively engage with challenging content

Please ensure that these strategies are implemented consistently.

Date of review:

