A picture containing text, person, accessory, people

Description automatically generated**HIAS SEN Support Guidance for School**

[SEN-Support-Guidance-for-Schools.pdf (hants.gov.uk)](https://documents.hants.gov.uk/childrens-services/HIAS/SEN-Support-Guidance-for-Schools.pdf)

**Section Six:**

**The Main Categories of Need: Strategies at SEN Support Level**

**6.1 Summary**

This section identifies some of the key strategies to meet the needs of CYP requiring SEN Support within the four main categories of need. Some of the strategies also feature within the universal offer of high-quality teaching but feature again for SEN Support because they are known to be particularly effective for certain categories of need.

* **Communication and Interaction including social interaction**
* **Cognition and Learning**
* **Social, emotional and mental health (SEMH)**
* **Sensory and/ or Physical**

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[British Dyslexia Association (bdadyslexia.org.uk)](https://www.bdadyslexia.org.uk/)

**Signs of dyslexia (Early Years)**

The following indicators may suggest that the pupil has a Specific Learning Difficulty (SpLD) such as dyslexia. Many young children will display these behaviours and make these mistakes. It is the severity of the behaviour and the length of time it persists which give vital clues to identifying a difficulty such as dyslexia.

**Indicators**

* Difficulty learning nursery rhymes
* Difficulty paying attention, sitting still, listening to stories
* Likes listening to stories but shows no interest in letters or words
* Difficulty learning to sing or recite the alphabet
* A history of slow speech development
* Muddles words e.g. cubumber, flutterby
* Difficulty keeping simple rhythm
* Finds it hard to carry out two or more instructions at one time, (e.g. put the toys in the box, then put it on the shelf) but is fine if tasks are presented in smaller units
* Forgets names of friends, teacher, colours etc.
* Poor auditory discrimination
* Confusion between directional words e.g. up/down
* Family history of dyslexia/reading difficulties
* Difficulty with sequencing e.g. coloured beads, classroom routines
* Substitutes words e.g. "lampshade" for "lamppost"
* Appears not to be listening or paying attention
* Obvious 'good' and 'bad' days for no apparent reason

**Next steps**

There is a large body of research linking speech and language difficulties in early childhood to later literacy problems. Identifying potential speech and language problems as early as possible is really important as much can be done before a child starts school to develop their language skills. This will then support their reading development at school.

A child can only be diagnosed with dyslexia through a Diagnostic Assessment but these are usually only carried out from 7 years old.

**Signs of dyslexia (Primary school age)**

If a child appears to be struggling with spelling, reading, writing or numeracy, how do you know whether these difficulties are potential indications of dyslexia?

There are some obvious signs such as a 'spiky' profile which means that a child has areas of strong ability alongside areas of weakness. You may also have other family members with similar weaknesses. Remember that not all dyslexic children will display the same weaknesses and abilities.

General signs to look for are:

* Speed of processing: slow spoken and/or written language
* Poor concentration
* Difficulty following instructions
* Forgetting words

**Written work**

* Poor standard of written work compared with oral ability
* Produces messy work with many crossings out and words tried several times, e.g. wippe, wype, wiep, wipe
* Confused by letters which look similar, particularly b/d, p/g, p/q, n/u, m/w
* Poor handwriting with many ‘reversals’ and badly formed letters
* Spells a word several different ways in one piece of writing
* Makes anagrams of words, e.g. tired for tried, bread for beard
* Produces badly set-out written work, doesn’t stay close to the margin
* Poor pencil grip
* Produces phonetic and bizarre spelling: not age/ability appropriate
* Uses unusual sequencing of letters or words

**Reading**

* Slow reading progress
* Finds it difficult to blend letters together
* Has difficulty in establishing syllable division or knowing the beginnings and endings of words
* Unusual pronunciation of words
* No expression in reading, and poor comprehension
* Hesitant and laboured reading, especially when reading aloud
* Misses out words when reading, or adds extra words
* Fails to recognise familiar words
* Loses the point of a story being read or written
* Has difficulty in picking out the most important points from a passage

**Numeracy**

* Confusion with place value e.g. units, tens, hundreds
* Confused by symbols such as + and x signs
* Difficulty remembering anything in a sequential order, e.g. tables, days of the week, the alphabet

**Time**

* Has difficulty learning to tell the time
* Poor time keeping
* Poor personal organisation
* Difficulty remembering what day of the week it is, their birth date, seasons of the year, months of the year
* Difficulty with concepts – yesterday, today, tomorrow

**Skills**

* Poor motor skills, leading to weaknesses in speed, control and accuracy of the pencil
* Memory difficulties e.g. for daily routines, self-organisation, rote learning
* Confused by the difference between left and right, up and down, east and west
* Indeterminate hand preference
* Performs unevenly from day to day

**Behaviour**

* Uses work avoidance tactics, such as sharpening pencils and looking for books
* Seems ‘dreamy’, does not seem to listen
* Easily distracted
* Is the class clown or is disruptive or withdrawn
* Is excessively tired due to amount of concentration and effort required

A cluster of these indicators alongside areas of ability may suggest dyslexia and further investigation may be required.

# Dyscalculia and maths difficulties

# [Dyscalculia and maths difficulties - British Dyslexia Association (bdadyslexia.org.uk)](https://www.bdadyslexia.org.uk/dyslexia/neurodiversity-and-co-occurring-differences/dyscalculia-and-maths-difficulties)

Dyslexia can occur in association with dyscalculia. Co-occurrence of learning disorders appears to be the rule rather than the exception and is believed to be a consequence of risk factors that are shared between disorders, for example, working memory. However, it should not be assumed that all dyslexics have problems with mathematics, although the percentage may be very high, or that all dyscalculics have problems with reading and writing.

Dyscalculia definition

Dyscalculia is a specific and persistent difficulty in understanding numbers which can lead to a diverse range of difficulties with mathematics. It will be unexpected in relation to age, level of education and experience and occurs across all ages and abilities.

Mathematics difficulties are best thought of as a continuum, not a distinct category, and they have many causal factors. Dyscalculia falls at one end of the spectrum and will be distinguishable from other maths issues due to the severity of difficulties with number sense, including subitising, symbolic and non-symbolic magnitude comparison, and ordering. It can occur singly but often co-occurs with other specific learning difficulties, mathematics anxiety and medical conditions.

BDA/SASC (2019)

Because definitions and diagnoses of dyscalculia are in their infancy and sometimes contradictory, it is difficult to suggest a prevalence, but research suggests it is around 5%. However, ‘mathematical learning difficulties’ are certainly not in their infancy and are very prevalent and often devastating in their impact on schooling, further and higher education and jobs. Prevalence in the UK is at least 25%.

**Signs of dyscalculia**

A person with dyscalculia/mathematical learning difficulties may:

* Have difficulty when counting backwards.
* Have a poor sense of number and estimation.
* Have difficulty in remembering ‘basic’ facts, despite many hours of practice/rote learning.
* Have no strategies to compensate for lack of recall, other than to use counting.
* Have difficulty in understanding place value and the role of zero in the Arabic/Hindu number system.
* Have no sense of whether any answers that are obtained are right or nearly right.
* Be slower to perform calculations. (Therefore give fewer examples, rather than more time).
* Forget mathematical procedures, especially as they become more complex, for example ‘long’ division. Addition is often the default operation. The other operations are usually very poorly executed (or avoided altogether).
* Avoid tasks that are perceived as difficult and likely to result in a wrong answer.
* Have weak mental arithmetic skills.
* Have high levels of mathematics anxiety.

**Diagnosis**

Dyscalculia is difficult to identify via a single diagnostic test. Diagnosis and assessment should use a range of measures, a test protocol, to identify which factors are creating problems for the learner. Although online tests can be of help, understanding the difficulties will be better achieved by an individual person-to-person diagnostic, clinical interview.

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**Steve Chinn The Trouble with Maths 2021 4th edition**

*‘Pupils are individuals. Some will need some of these suggestions, some will survive without any of them. However, I do not think that any learner will be disadvantaged by any of these suggestions and many will be advantaged. The suggestions may reduce some of the learning (special) needs in your classroom and even prevent the onset of some problems’* p23

‘*The key question, when faced with a learner who is struggling with learning maths, is ‘where do I begin? How far back in maths do I go to start the intervention? This may be a difference between the dyscalculic and the dyslexic or any leaner who is also bad at maths’[] It may be that fundamental concepts such as place value were never truly understood, merely articulated*’

p17

‘*There are many reasons why a child may fail to learn maths skills and knowledge. For example, a child who finds symbols confusing may have been successful with mental arithmetic, but then finds written arithmetic very challenging. [] a dyslexic will probably find word problems especially difficult and a child who is not dyslexic, but is learning at the concrete level may find the abstract nature of algebra difficult. A child who is an holistic learner may start to fail in maths if their new teacher uses a sequential and formula -based step by step teaching style. A learner may have a poor mathematical memory and as the demands maths makes on memory increase, they may suddenly exceed their capacity.*

*Learning difficulties are obviously dependent on the learning task. Teachers need to know and proactively address the prerequisites of any task with all their learners in mind’*

P18

**Short Term memory.**

Pupils in all classes will vary in their short – term memory capacity. This may be a developmental lag or a persistent problem. Teachers need to know which pupils have weak short -term memories to help appropriately. A short- term memory capacity for three items will have a significant impact on absorbing information in the classroom.

|  |  |  |
| --- | --- | --- |
|  | Affecting learning | Possible strategies |
| Short term memory | * Remembering initial introduction and modelling instructions and recalling further suggestions during the lesson | * Keep instructions short (not motivational issue but neurological) * Encourage jottings to remind * Leave a clear reference on the board * Use ipad with image/ instructions recorded * What ‘habits’ would help to avoid overload? |
|  | * Mental arithmetic- remembering the question | * Write down questions (what are you testing- maths or memory?) |
|  | * Procedural recall – too many steps for short term memory capacity | * Look at method being used- suggest alternatives? Use jottings or diagrams * Provide a model * Encourage sub vocalisation |
|  | * Mental arithmetic hampered by slow retrieval of basic facts | * Provide model +facts eg for 5 * Provide a basic addition square for bonds of 10 * Provide a partially completed tables square with 2x, 5x, and 10x facts |
|  | * Needing to copy from the board, worksheet maybe copy only 2/3 items (numbers/ words) at a time, may mix up parts if questions, creating new extra questions | * Provide the question * Use highlighters to track position/ progress * Mark the question they create |
|  | * Easy option is to opt out and not try avoiding being wrong. Fear of negative evaluation | * Discuss options and ensure appropriate resources available |
|  | * ??? |  |

**Working memory**

The memory used for working things out in your head. Mental arithmetic and also written problems with recording of solutions – how many steps needed to be able to review and check solutions related to this capacity. Increasing appreciation that a deficit in this skill has a major impact on learning and doing maths. Teachers need to know which pupils have weak working memories. Working memory is susceptible to distractions such as background noise.

|  |  |  |
| --- | --- | --- |
|  | Affecting learning | Possible strategies |
| Working memory | * Poor performance in mental arithmetic | * Select questions that do not over load. Use Core facts 2x, 5x, 10x, 10,20 etc) * Allow pupils to make notes * Have a basic fact multiplication square so that time and memory capacity are not wasted on accessing facts * Keep anxiety to a minimum as can decrease working memory capacity. Asking ‘do this quickly’ ethos will increase anxiety for many learners |
|  | ?? | ?? |

**Long -Term mathematics memory**

This is long term memory for mathematical information. It is a specific memory for maths information and thus may be weaker than memory for ither information, e.g. spelling

|  |  |  |
| --- | --- | --- |
|  | Affecting learning | Possible strategies |
|  | Recall of specific vocabulary | * Create bespoke word banks |
| Long- term memory | Instant recall from memory of basic addition and subtraction facts in a persistent problem, particularly in ‘tests’ where anxiety can be greater. | * Allow finger counting (be aware this will not develop number skills) * Teach pupils how to build on key addition facts such as doubles and any number bonds to 10 |
|  | Instant recall of tables facts a persistent problem | * Teach pupils how to create their own multiplication facts square. * Teach pupils strategies to build on the easy facts eg 2x linked to 4x, 9x linked to 10 x etc |
|  | Unable to remember long multiplication algorithm | * Teach repeated addition of partial products using 2x, 5x, 10x, 20x etc |
|  | Unable to remember division procedure | * Teach repeated subtraction in chunks/ partial products |

|  |  |  |
| --- | --- | --- |
|  | Affecting Learning | Possible strategies |
| Presentation of tasks | * Worksheets with lots of different types of problem can be overwhelming * Worksheets with lots of the variations of tasks presented in one go can be overwhelming | * Group one or two examples together * Present problems one at a time * Have ‘next question’ ready when needed |
|  | * Check reading level of word problems | * Pre teach nouns, verbs and phrases * Check if sentences scan across the page and make sense |
|  | * Squared paper can be visually confusing when drawing number lines | * Provide plain paper for some tasks * Consider different sizes of squares |
|  | * Setting out and organising steps in solutions | * Provide scaffolded spaces until pupil has internalised how to organise * Provide a partial written out model to complete |
| Not checking answers | * Checks quickly but inadequately | * Encourage checking by an alternative method * Encourage checking by estimation- does it make sense? * Use ‘is the answer bigger or smaller’ appropriate to context * Allow a wide guess/ estimate and edge towards closer estimates * Ask – what would be a ‘silly’ answer |
| Type of thinker:   * Intuitive, answer- oriented * Sequential, formula -oriented | * Pupils may be intuitive answer orientated problem solvers who may not learn from a step by step, sequentially orientated, formula -dependent teacher and vice versa. Differences in cognitive style and metacognition present in the whole school population including teachers, but impact on pupils with dyslexia, dyspraxia or dyscalculia (with their other contributing problems) is likely to be more critical. |  |
|  | * Sequential, formula orientated learners with poor memories are at risk of failure in mathematics |  |
|  | * Intuitive, answer -orientated learners are at risk if they are inaccurate and if they do not learn to document their work |  |
|  | * Many pupils with learning difficulties do not adjust quickly to changes in routines, eg if a new teacher expects a different page layout for a procedure |  |
|  |  |  |