



Supporting Children with Dyslexia

Dyslexia Handbook for Staff

British Dyslexia Association

"We know that dyslexia comes with many challenges, but because dyslexia itself isn't visible, individuals with dyslexia often feel unsupported, unwanted, invisible. From the child at school struggling to keep up with the rest of their friends, to the office worker feeling like they don't belong.

Dyslexia also too often goes hand in hand with other invisible challenges. People can struggle with their mental health. There can be discrimination in the workplace. Legislation fails to consider the dyslexic perspective. Under-represented groups become lost."

Dyslexia

"Pupils with dyslexia have a marked and persistent difficulty in learning to read, write and spell, despite progress in other areas. Pupils may have difficulties reading, comprehension, handwriting and punctuation. They may also have difficulties in concentration and organisation and in remembering sequences of words. They mispronounce common words or reverse letters and sounds in words."

(www.teachernet.gov.uk)

"Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy learning at the 'word level' and implies that the problem is severe and persistent despite appropriate learning opportunities. It provides a basis for a staged process of assessment through teaching."

(British Psychological Society: Division of Education and Child Psychology, 1999)

Up to 10% of children may be on the dyslexic continuum, i.e. two to three in every class.

Characteristically children with dyslexia have problems with auditory and visual processing (see *Glossary*), as well as some of the following difficulties:

- Organisational problems
- Poor fine motor control
- Poor spoken and/or written language
- Poor concentration

When reading the following may be noticed:

- Hesitant and laboured reading
- Words/whole lines omitted or repeated
- Over reliance on one cueing system (see *Glossary*) e.g. context, phonics etc.
- Visually similar words/letters confused e.g. on/no, b/d.
- Difficulties reading multi-syllabic words
- Difficulty decoding shorter words
- The child may complain words look blurred or appear to move on the page.

During written work the following may be noticed:

- A disparity between what the child can write and their spoken language
- Untidy work and use of 'camouflage strategies' i.e. covering possible mistakes with poor handwriting
- Slow and laborious handwriting which may be extremely small or large
- Confusion between upper and lower case letters in writing
- Difficulties planning written work
- Difficulties copying from the interactive whiteboard
- Difficulty taking notes
- Poor spelling which is often difficult to read

These difficulties, especially poor spelling, can persist even when mechanical writing difficulties have been overcome.

If these difficulties are not identified and addressed at an early stage, children can become demotivated and their self-esteem and confidence can be damaged. Children who do not feel they are reaching their potential often become frustrated when they compare themselves with their peers. In some cases, this can lead to behavioural difficulties. The suggestions included in this pack should enable staff to provide strategies to help children overcome and circumvent some of their difficulties.

Features and Strategies

Although this section is divided into Key Stages, many themes will apply to all children regardless of age

Signs of dyslexia - Early Years

The following indicators may suggest that a child 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. cucumber, 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

Signs of dyslexia - Key Stage 1

Even at this stage early signs of dyslexia can be detected. These should be addressed as soon as possible in order to prevent the child losing self-confidence and becoming entrenched in their difficulties.

The following may be apparent:

- No interest in words or letters despite an obvious enjoyment of books
- Poor concentration and listening skills
- Difficulty in remembering instructions
- Speech delay or disorder
- Poor fine/gross motor skills
- Difficulty clapping syllables
- Difficulty hearing and reproducing rhyme
- Difficulty learning alphabet sounds and names
- Difficulty with sequencing, e.g. the alphabet, days of the week
- Difficulty blending and segmenting phonemes
- Difficulty learning words by sight
- Difficulty remembering shapes of letters and order to write them in
- Considerable difficulties learning to read

How to Help

- Value the child for what he/she can do, praise frequently wherever appropriate.
- Continue to develop the child's interest in books through shared reading, discussion of content, encouraging the child to join in at certain sections, repetitive texts e.g. chanting with known parts.
- Provide repeated, clear instructions, checking the child understands
- Expand the child's sentences and model correct responses.
- Provide triangular pencils or pencil grips to encourage correct grip when writing. Make sure writing implements are not blunt.
- Encourage and model correct letter formation using tactile letters, drawing in sand and drawing on white boards.
- Encourage the child to listen for syllables in words e.g. clapping syllables in each other's names.

- Provide frequent opportunities to listen to and use rhyme
e.g. poems, make rhyme books, make rhyming sentences (the fat cat sat on the mat) and illustrate them.
- Play lots of games where the child has to isolate the first sound in a word e.g. I spy.
- Teach picture links with alphabet sounds
e.g. alphabet mats.
- Teach letter sounds and word building using multi-sensory techniques
e.g. sight, sound, speech and touch.
- Use predictable texts that encourage re-reading and texts at an appropriate level for independent reading.
- Encourage the child to point to words in the text as they are read.
- Provide the child with a variety of interactive activities in order to help the child learn sight words e.g. motivation charts, adapted games such as Bingo.
- Interest and involve parents whenever possible, being aware that they too may have similar difficulties.

Signs of dyslexia - Key Stage 2

At Key Stage 2 difficulties with reading and spelling become more apparent. The child may be more self-conscious about their literacy problems with consequent effects on motivation and behaviour.

Difficulties in Key Stage 1 may persist, in addition:

- Instructions may not be remembered or understood.
- The child dislikes reading and does not want to read.
- There may be an over-reliance on the use of one particular cue for reading e.g. they depend on context or always try to sound out words letter by letter.
- Words or whole lines may be omitted or repeated when reading
- Decoding or encoding multi-syllabic words cause difficulty.
- Meaning may be missed when reading because of a lack of fluency.
- There may be a disparity between what the child can write and their spoken language.
- Spelling may be unusual/unrecognisable or phonic bound, with every word spelt as it sounds.
- Spelling rules prove very difficult to grasp and retain.
- There may be confusion between upper and lower case letters in writing, e.g. He is a Boy.
- There may be problems with reversal and orientation of letters and words e.g. b/d, was/saw, upper case B & D may be used to avoid this.
- Writing may be slow, untidy and sometimes indecipherable.
- Planning written work may be problematic.

How to Help

- Ask the child to repeat instructions to ensure they understand the task.
- Help with organisational skills by providing brief checklists and a visual timetable to remind the child about routine activities such as the layout of a piece of writing.

- Provide books at an appropriate reading level and ensure regular reading and discussion time is available.
- Involve the child in the selection of texts.
- Avoid asking the child to read aloud unless they specifically volunteer, then keep the passage reasonably short.
- Provide the opportunity to warm-up the text prior to reading.
- Provide tools to aid a child to be able to follow a text, e.g. transparent reading markers.
- Discuss with the child what strategies can be used to decode unknown words.
- Encourage the use of a range of alternative strategies, not just one.
- Make sure the child has a clear view of the interactive whiteboard.
- Do not ask the child to copy from the board; provide them with a copy of the text on their desk
- Teach highlighting techniques to promote location of information in text - key points etc
- Allow and encourage use of ICT for writing
- Use writing frames to aid organisation of information when writing.
- Encourage use of a variety of dyslexia friendly dictionaries to assist with spelling.



Foundation Stage Dyslexia Checklist

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Name				Class		
DOB		Age		Date		

Difficulties	Yes	No
Family history of similar difficulties		
May have walked early but did not crawl		
History of intermittent hearing problems		
Difficulty in getting dressed, buttons, shoe laces		
Can be clumsy and show a lack of coordination		
Slow to develop speech		
Speech may be indistinct		
Problems finding the right word to describe things		
Difficulty in pronouncing long words (multi - syllabic)		
Lack of awareness of rhyme		
Lack of awareness of sounds in words		
Difficulty with naming letters		
Little interest in print/ avoidance of reading		
Inability to read cvc words		
Enjoys being read to, but can lose the thread of a story		
Difficulty in following instructions		
Poor concentration		
Seems to tire quickly		
Other (describe)		

Strengths	Yes	No
Good receptive vocabulary		
Imaginative		
Enjoys practical activities – construction toys, etc.		
Enjoys conversation		
Empathetic to the needs/feelings of others		
Enjoys solving problems		
Interested in finding things out		
Good comprehension of texts when read to		
Prefers drawing pictures than writing		
Other (describe)		

Years 1-8 Dyslexia Checklist

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Association



Name				Class		
DOB		Age		Date		

Difficulties	Yes	No
Family history of similar difficulties		
Difficulty with phonological awareness especially at the phoneme level		
Difficulty with following instructions		
Need for time to produce an oral response when questioned		
Lack of fluency in reading affecting comprehension		
Inaccurate decoding		
Fear of reading aloud		
A lack of enjoyment of reading		
Persistent and marked difficulty with spelling		
Messy, laboured handwriting		
Difficulty in finding the right word to describe things		
Mispronounces words		
Difficulty in remembering sequential information, e.g. alphabet, times tables, days of week		
Poor short-term working memory		
Takes longer than average to complete written tasks		
Difficulty copying from the board		
May describe visual discomfort when text reading		
Can be clumsy and lack co-ordination		
Mixing up numerical symbols		
Difficulty with Math's vocabulary		
Miswriting of numbers		
Low self-esteem		
Behavioral difficulties		
Other (describe)		

Strengths	Yes	No
Imaginative		
Good at thinking and reasoning skills		
Able to see the "big picture"		
Good at problem solving		
Good general knowledge		
Good understanding of texts that have been read to him/her		
Curious		
Sophisticated receptive language		
Good visual-spatial skills		
Other (describe)		

Supporting Literacy

Supporting Reading in the Classroom

- Ensure your child has a book he/she can read! Use the five finger test as a rough guide (no more than five errors on a page of text)
- Use reading records to make constructive comments about strengths and areas that need help and encouragement e.g. using initial letters
- Ensure the child attempts to use a balance of cues when reading and encourage the use of these at the appropriate time: picture cues, initial letters, meaning, reading on and back, use of syntax (grammar) and more advanced phonic knowledge when appropriate
- Be clear about what reading strategies should be used and provide explicit feedback including reasons why success has been achieved.
 “Well done! You re-read that sentence and managed to work out that word you didn’t know.”
- Provide opportunities for reading with an adult as often as possible. The child does not have to read all the text, it can be shared with an adult, e.g. teacher 2 paragraphs, child 1 paragraph
- Make sure reading level of support materials is appropriate and that presentation is clear and logical. The child may need to be taught techniques for reading the information, e.g. highlighting key words and main points either by teacher or the child
- Use non-white background for information and worksheets
- Sit the child next to a “reading buddy” who can help them with reading when necessary

Establish good home/school links and encourage parents to hear their child read. If this causes difficulties at home, help parents to work with their child in less stressful ways, e.g. via games

Reading and Comprehension for Information

Provide differentiated work for varying ability levels, for non-readers it may be necessary to present information through pictures or charts plus a few key words. Alternatively children can select responses from lists provided (multiple choice).

If children do not understand what they have read, suggest the following:

- Read text aloud
- Break texts down into small, easily remembered pieces of information. This can be done with highlighting pens
- Highlight key words in both the questions and the text
- The skills of scanning and skimming texts are helpful for older children. They will need practice in this type of exercise.
- Write a summary of the text out in their own words
- Make a mind map of the text. (A mind map is a non-linear, visual way of presenting information. Mind mapping involves taking the main ideas as lines from a central subject and then showing other points arising from these as branches from these lines)
- Convert information from text into pictures or cartoons
- Teach use of index and content pages
- Show how chapter and paragraph or section heading can be used
- Look for an overall summary.

Spelling and Writing in the Classroom

Children who are dyslexic have difficulty with spelling. They can have poor visual and/or auditory memories so they cannot remember what a word looks like or what it sounds like. Sometimes they cannot match phonemes with symbols, that is, they lack sound/symbol correspondence.

These are some of the strategies that children can be taught to help them spell:

- **Look Say Cover Write Check Say.** The child looks at the word, says the word aloud, covers it, writes it from memory and checks to see if it is correct. Finally the child says the word again.
- For young people who have a good knowledge of letter names and sounds, **Simultaneous Oral Spelling (SOS)** may be useful. The child reads the word, then writes it saying the names of the letters as s/he writes them, he/she then checks the word and if correct the process is repeated
- **Multi-sensory methods.** Both the above methods are multi-sensory, but there are other ways of utilising all the senses, e.g. tracing letters in the air, writing

letters in sand, spelling words with plastic letters (sometimes with eyes shut) or using plastic letters to muddle and remake words

- **Mnemonics** (cued spelling) for common irregular words. Link this to a picture, get the child to draw and visualize it e.g. **big elephants can add up sums easily = because**
- **Syllabic division.** This encourages the child to tap number of syllables in the word to be spelt. Alternatively the word can be written onto card and cut into syllables. Children find it easier to learn and remember words when they are divided into smaller units.
- **Saying words as they are spelt**, e.g. Wed/nes/day and Feb/ru/ary. This helps them include indistinct sounds.
- Looking for **words within words**, e.g. together :- to get her. **Common letter patterns**, e.g. sing, ring, wing.
- Limiting number of spellings to be learnt and allowing the child some involvement in their selection.
- Drawing the child's attention to specific spelling errors, e.g. those words he has recently learnt or familiar letter strings. It is discouraging if all spelling mistakes are corrected. Ask the child to identify some of their errors.
- Use of joined writing.
- Discussion with the child how close his/her spelling attempts are to the required word. For example 'cathc' is close to 'catch'.

Other ways to help include:

- Use of labels and topic words with visuals in the classroom.
- Provide high frequency word lists and subject word lists with visuals on each table
- Use of either the ACE dictionary or simplified spelling dictionary. The ACE dictionary provides a spelling aid and, in addition, improves phonological skills by focusing on syllable division and the significance of vowel sounds.

Getting Ideas and Planning Written Work

All children have individual learning styles. None of these suggestions will suit everyone. The important thing is to try and see which is successful for each individual. To help children with written work, teach and model the following:

- Plan work using mind maps, also known as cognitive maps, webs or spidergrams. (See section on Comprehension for more information about mind maps.)
- Children can also use writing frames or question and answer sheets

- Provide time indicators so that the children know how long should be spent on different parts of the assignment
- Use 'Thought showers' to encourage the child to think of all everything pertinent to a particular subject. Related points can be colour coded using a highlighter to assist paragraphing
- List key words/ideas in a logical order. Later on these can be grouped into meaningful paragraphs
- Encourage thinking about the questions
Who...? What...? When...? Where...? and How...?
 - Check that ideas are relevant to the subject
 - Put ideas on cards and place them in order. Once the correct sequence is established the cards can be numbered in case they get muddled
- Use writing frames with a logical first sentence for each paragraph. This will ensure that the written work answers the questions and makes it less likely that important points will be omitted.

Children may miss the main learning objective while struggling to keep up with writing tasks. By providing alternative methods of recording they can demonstrate their knowledge and understanding free from the stress involved in producing lengthy written work.

Alternative methods of recording are:

- Use of a Dictaphone
- Use pictures or cartoons with speech bubbles
- Graphs and tables
- Diagrams
- Use of a scribe
- Word processing
- Keyboard skills should be developed as a computer may enable children to work with greater speed and accuracy.

Provide short achievable tasks for class work and check the child is coping. For non-readers, read back any written work they have dictated or recorded so that they can illustrate their work or use it as a basis for further activities.

Training in Essay Writing

Plan by:

- Highlighting key words in question/title

- Understanding the different types of answer needed for:
Describe... Compare... Contrast... Write an account...
Write a report... etc.
- Using thought shower or mind mapping techniques discussed in Planning Written Work section above
- Listing main points for each paragraph
- Discarding irrelevant material
- Setting out relevant points in introduction
- Ensuring paragraphs follow logically
- Seeing that conclusion pulls essay together
- Proof reading: students need to be taught a routine for proof reading. It will help if they focus on one area at a time; for example first check for content and, especially in English, for the use of appropriate/interesting vocabulary, read again and then check the grammar and finally for spelling errors.

Organisation in the Classroom

Teachers need to understand the difficulties that children who are dyslexic experience in the classroom. In addition to problems with reading, writing and spelling they may have a limited auditory memory, poor organisational skills and low self-esteem. The following ideas may help the child who is dyslexic learn more effectively.

- Plans, lists, charts, memory aids and strategically placed visual timetables can help with organisation at home and at school
- Good use of a weekly planner or diary can ensure that homework is recorded and requirements for school, e.g. P.E. kit are listed
- Good communication with home is very important to help the organisational skills of the child, e.g. regularly checking homework diaries
- The child should be seated near the teacher and away from distractions
- Ensure the child has 'listened to' and 'heard' instructions by mentioning their name, questioning or alerting them to the fact that they may be asked to repeat instructions
- Ensure the child is facing the interactive whiteboard
- Writing on the interactive whiteboard needs to be clear and well-spaced, read out loud and discussed. A coloured background should be used
- Coloured markers are useful for key concepts, linking ideas, differentiating between instructions and information.
- Copying from the board should be avoided. Provide the information on light coloured paper, with symbols to support
- Mark sympathetically for content rather than presentation
- Everyday classroom equipment, e.g. scissors, need to be clearly labelled and easily accessible
- Personal possessions should be clearly marked

Study Skills

Due to difficulties with literacy and organisation, children with dyslexia will need training in study skills so they can access information and record work effectively.

All children have different learning styles and multi-sensory teaching at its best will cater for these differences.

For children with good **aural** skills allow them to listen attentively without the burden of taking notes. A written summary of the main points of your lesson may be needed for revision purposes before exams and tests. Alternatively ask permission to photocopy another child's notes. A recorded copy of the lesson would allow the child to listen at leisure.

For children who learn **visually** provide copies of diagrams and flow-chart. Encourage these children to record work using pictures, cartoons with speech bubbles, comic strips, diagrams, graphs and tables.

Children who benefit from the **tactile** approach need to be actively involved in the task. Those who learn best **kinaesthetically** need to make diagrams and drawings to reinforce aural input.

Role-play, debate and argument provide opportunities for those whose strength is **oral** presentation.

Memory Skills

Children with a poor auditory memory may find it difficult to cope with the amount of information they are required to retain, relating both to curriculum input and following instructions. Memory training and minimising the information that the children have to remember can help overcome this problem.

Teach children to develop memory skills by:

- Clearly establishing the purpose of the lesson and what has to be remembered
- Building on their existing knowledge
- Using multi-sensory teaching to facilitate their particular learning style
- Providing opportunities for them to practise and apply new knowledge
- Using memory tricks such as mnemonics and visual imaging
'Picture this in your head...'
- Expanding memory by increasing amount of information the child has to remember slowly, gradually extend number of command carrying words when giving instructions
- Teacher repeating information, ensuring instructions are delivered in small steps
- Asking the child to repeat instructions
- Providing recorded information
- Showing children how to group information
- Providing prompts such as written headings
- Allowing extra time for absorbing and processing information (this has implications for children doing exams)

Speech, Language and Communication Needs

Speech, language and communication needs are a feature central to and common across many areas of special educational need, including dyslexia. In these cases, speech, language and communication needs are secondary to the primary condition; however they can impact hugely on the development of literacy skills, particularly the development of phonological awareness. Although children with underlying speech and language difficulties may appear to know their letter sounds, this may conceal a difficulty in manipulating and processing the sounds when reading. It is important to note that an early difficulty in articulating speech sounds may also affect phonological development and lead to subsequent problems with reading.

Indicators of speech and language difficulties:

Phonological Difficulties (awareness, storage and use of sounds in words)

- Poorly established sound system (ability to link written letter to spoken sound)
- Difficulty with blending letter sounds
- Difficulty in processing and segmenting the sounds in words for spelling

Expressive Language Difficulties

- Difficulties with word order
- Difficulties with word retrieval
- Difficulties using correct grammar, e.g. tenses and plurals
- Difficulty organising and sequencing ideas in written work
- Restricted expressive vocabulary

Receptive Language Difficulties

- Difficulty processing meaning of text
- Difficulty processing and understanding instructions
- Difficulty understanding complex sentences (spoken or written)
- Restricted receptive vocabulary

Ways to help Phonological Difficulties

- Assess current level of phonological awareness and establish areas to teach
- Use actions, signs and picture cues to support learning of letter sounds
- Help children to blend sounds by:
 - Modelling the blending and segmenting process
 - Providing visual prompts, e.g. letter cards, magnetic letters and writing
 - Teaching phonemic segmentation skills, e.g. syllable clapping, division into onset and rime and phoneme deletion exercises
 - Verbally rehearse the phoneme sequence for spelling

Expressive Language Difficulties

For word finding difficulties teach strategies for word retrieval:

- phonological cues (initial sound, rhyming word)
- semantic cues (e.g. what category, what does it look like, what is it used for)
- Pre-teach new vocabulary in advance.
- Display words with pictures/symbols in the classroom to aid recall.
- Encourage oral rehearsal and peer discussion
- Teach narrative skills
- Allow time for child to process language and respond

For word order, grammar and sequencing difficulties:

- Use picture sequencing cards
- Teach mind mapping skills
- Consider colour coding different parts of speech
- Model back correct response
- Extend language by modelling back

Receptive Language Difficulties

For difficulties with word meaning:

- Repeat instructions, keep language simple
- Check for understanding
- Encourage children to ask if they do not understand
- Teach new vocabulary and concepts if necessary
- Use real objects to touch, taste, smell, hear
- Use photos/pictures/symbols to support vocabulary

For difficulties understanding long complex sentences:

- Teach good attention and listening behaviours
- Give instructions one at a time
- Speak in short sentences
- Give time to process verbal information

For difficulty remembering what has been said, such as information or instructions:

- Use pictures, signs, symbols to reinforce speech in lessons
- Encourage children to visualise what they have to remember
- Encourage verbal rehearsal of instructions, i.e. children repeat what they have to do
- Play games, e.g. 'I went to market and bought...'

For difficulty with comprehension:

- Avoid instructions and language that require inference, be explicit
- Develop reading for meaning alongside reading accuracy
- Provide co-operative activities for a group, these could be art or oral work as well as written tasks
- Children draw pictures of a sequence of events and place in chronological order
- Encourage prediction for both story listening and reading
- Explain idioms and metaphors

A Communication Friendly Classroom

Above all, it is important that the classroom environment is supportive of children with speech, language and communication needs. A communication friendly environment enables children to develop their social, emotional and academic potential by reducing or removing barriers to communication. Surroundings that eliminate or minimise barriers to the sending and receiving of information, successfully enable children to develop their academic, social and emotional potential.

A communication friendly classroom enables better access to the curriculum for all children, including children with dyslexia.

Mathematics In The Classroom

Children may have problems with:

- Short term memory
- Organisation skills
- Fine motor control
- Spoken and written language
- Concentration
- Self-esteem and consequent lack of confidence
- Writing (oral skills may be better)
- Presenting work
- Handwriting
- Working quickly so tasks remain unfinished

The child will respond positively to:

- The same structured sequential, multi-sensory teaching methods that are applied to reading and spelling
- Clearly defined, achievable targets which are used to guide a small steps learning programme
- Principles previously outlined, including:
 - Positive reinforcement
 - Clarity of exposition by the teacher
 - Use of games to consolidate learning
 - Help with organisation skills
 - Provision of notes and exercises to obviate unnecessary copying from the board
 - Need for concrete experiences and verbalisation before introducing abstract concepts

Problems affecting children with Dyslexia

- Children with dyslexia appear to have poor short-term memory. This means they may:
 - Be unable to recall facts such as number bonds and tables
 - Forget which symbol they should be using
 - Forget which process they are using

- Difficulties with organisation and planning lead to: General untidiness and poor presentation of work; this is particularly important in computation work where numbers have to be 'lined up' correctly for operations involving place value
- Difficulty identifying mathematical problems. This difficulty can be compounded if the problem is presented in written form and the child has to read as well as identify the task
- Sequencing difficulties lead to problems with number reversals and number order and consequent
misunderstanding regarding place value and decimal points
- A particular learning style might not suit every child. It may be necessary to adapt teaching style and strategies to the needs of the child
- Language difficulties can cause confusion with mathematical terminology
- Problems seeing patterns and relationships

How To Help

- Introduce and explain the language of numeracy
- Discuss symbols such as $+$ $-$ \times $=$ aloud so the child is familiar with the language and is confident about the processes. It may be necessary to highlight the symbol to draw attention to the function.
- A visual representation in the form of the symbol encircled by all the synonyms will help children understand the process. Thus an addition sign would be in the centre of a circle with words like 'add', 'plus', 'total', 'sum of', 'and', 'more than', 'increase' and 'addition' round the edge
- **Tables** present a particular problem for children with short-term memory. To utilise visual strengths, use squared paper to provide a graphical representation of tables. Children can colour in tables using a 10x10 number square. This will show the pattern created by each table. If necessary, provide tables squares up to 10x10 including the naught times table. There are 121 facts to be learnt, reduce these by using some of the following strategies:

Learn the naught, one and 10 times table

Learn the five and ten times table as these are easy to remember

The nine times table can be taught through patterns. If children learn the commutative property unknown facts are halved

Utilise the child's existing knowledge. For example, if the sum is 9×8 , the child may know 10×8 is 80 so 9×8 is $80 - 8$

Dienes blocks or Cuisenaire rods provide a visual way of 'building up' tables.

- In the beginning, children should be encouraged to use mental counting strategies. As they progress to larger numbers and more sophisticated mental methods they will record some of the intermediate steps using informal pencil and paper notes. This will lead to the use of more formal methods of recording calculations. The strong emphasis on mental calculation, rather than the formal layout of sums, during the early years will allow children who are dyslexic to build up basic skills in number without the burden of setting out and writing each process
- For some children **written mathematical tasks** will present two difficulties, reading the question and then identifying the problem. Children need to understand mathematical symbols and terms before they can analyse and solve the problem. Present the question with the minimum amount of writing. Discuss the problem with the children and ask them what the question is asking them to do. Decide which symbols are required, e.g. **+** or **x**. Read numbers aloud. When numbers are copied provide some means, such as a piece of card, to isolate those numbers. Ensure that copied numbers are checked carefully against the original.
- Children with **sequencing problems** often write numbers the wrong way round. A number line from 0 to 10 on the desk or classroom wall will provide a useful reference. The use of tactile numbers, so the children can feel and talk about direction and shape, will help others. Some children find it helpful to know that the numerals 2,3,4,5 (if the vertical line is drawn first), 6 and 7 always start in the top, left corner of a square
- Children who order numbers wrongly (eg. 39 instead of 93) need to have a thorough understanding of place value. Dienes apparatus with squares for 100s, rods for 10s and little cubes for units provide a concrete, visual experience of number. There are various games with number cards to reinforce this concept. Blank and written number lines are also very helpful. Children can be encouraged to say the number as they write it down. Provide practice at writing dictated numbers and arrow cards to reinforce place value
- Numicon apparatus provides a visual representation of numbers and enables children to explore the relationship between numbers. Numicon is a strong, multi-sensory teaching tool which helps the transfer from visual, concrete experiences to abstract thought
- Children who are dyslexic often have problems seeing **patterns and relationships**. However, patterns can be used to simplify problems and they

provide a logical progression and take the child forward to new concepts and facts. For example, there are various ways of working out $9+4$ but, if the child learns that 9 is 1 less than 10, and then establishes the pattern for adding 10 and then deducts one, s/he has learnt to calculate a series of facts. From those facts the child can generalise to produce a rule, which will apply to any number, added to 9. Patterns provide structure and organisation, reduce the load on memory, and help understanding and the development of concepts

- They lack confidence in **estimating numbers**. Allow for plenty of practice starting with easy numbers. Explain the importance of estimation. Present, diagrammatically, the meaning of decimal place and significant figures
- **Fractions** can be very challenging because of the language associated with fractions: improper, vulgar, denominator etc. Once children have established the basic concept of a fraction and can do simple operations with $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$ teach them to use a calculator. Use concrete examples to demonstrate fractions, working with string or cutting apples etc. Establish basic rules, e.g. a $\frac{1}{4}$ means dividing by 4. Relate fractions to real life situations. Use computer games that demonstrate visually the process
- Some children find it hard to grasp the concept of **percentages**. Discuss the symbol and what it means; that is divide by 100. Provide lots of practice so the children can find percentages and convert back into numbers. Relate 50%, 25% and 75% to fractions. Use 100 square to relate decimals, fractions and percentages
- Dyslexics often have a poor **concept of time**. Use digital numbers when possible because, with modern technology, children are good with digital displays. Provide a chart showing months with the number of days in each month. Let the children manipulate the hands on cardboard clocks and provide practice at reading them. Use T.V. programme, time tables and cooking as a focus of interest. Use time lines
- **Ratio**, the associated language and its relation to fractions are another area of difficulty. Discuss abbreviations, language and symbols. Present information visually
- The term algebra and the use of symbols appear threatening. Tasks must be broken into very small steps. Use balances to demonstrate equivalence. Teach basic conventions, for example letters or letters and numbers close together means multiply.

How dyslexia can cause stress and anxious feelings

Children with dyslexia feel anxious at times. They can face many stressful situations throughout a day. Many of those situations involve "what ifs" — a big part of anxiety. Here are two examples:

- Carl has to go to the "easy shelf" when the class is picking out reading books. *"What if the other kids see me and think I'm stupid?" What if they say I'm reading baby books?"*
- The class is taking turns reading passages from a book. Victoria is worried. *"What if the teacher calls on me and I trip over the words?"*

Children with dyslexia often have fears about what might happen if they need to do something that involves reading. They may be afraid of failing, or of being judged or embarrassed. There may even be moments when they fear they'll never learn or succeed at anything because of their reading challenges.

These negative emotions are understandable. But they typically don't spread beyond the situation at hand. With understanding and the right support, children can move past them fairly quickly. When children with dyslexia have stressful experiences often, the emotions can pile up. And so can the anxiety.

When dyslexia causes ongoing stress and anxiety

Children with dyslexia are as smart as their peers. But they face **more daily stress** because of their challenges.

They often have to cope with struggles, setbacks, and negative feedback at school. Because of this, some struggle socially and feel like they don't "fit in." Their trouble with reading can create "I can't" feelings that impact learning in other areas. This negative view can also impact everyday life.

Feeling a lack of control is a common source of anxiety. Children with dyslexia can feel like nothing they do will make a difference. That's often because they don't know what's "wrong" with them or why they just can't read like other children.

After a while, the ongoing stress doesn't just affect children in the present. Instead of only feeling anxious about something that's happening now, children may start worrying in advance. The "what ifs" may start being about things that will or might happen farther in the future.

When the anxiety rises to that level, it can move beyond being just a temporary issue. It can become a chronic problem.

Chronic anxiety doesn't just feel bad. In some cases, it can lead to disciplinary issues. Some children may act out, clown around, or skip class. They may do that to avoid the shame they often feel during activities that involve reading.

For some children, the anxiety about reading doesn't always stay limited to just reading. Children may decide that if they "stink" at reading, they'll "stink" at everything else.

To avoid the risk of failure, they may avoid new challenges altogether. They may give up on other classes and activities when they become difficult, or not even bother trying in the first place.

Dyslexia Style Guide: Creating Dyslexia Friendly Content

This Style Guide provides principles that can help ensure that written material considers the difficulties experienced by some dyslexic people and allows for the use of text to speech to facilitate ease of reading. Adopting best practice for dyslexic readers has the advantage of making all written communication easier on the eye for everyone.

When making changes consider all the ways that you use written communications, such as emails, presentations, web pages and printed materials. Consider these principles in combination with other accessibility guidance such as the Web Accessibility Content Guidelines (WCAG).

Readable Fonts

- Use sans serif fonts, such as Arial and Comic Sans, as letters can appear less crowded. Alternatives include Verdana, Tahoma, Century Gothic, Trebuchet, Calibri, Open Sans.
- Font size should be 12-14 point or equivalent (e.g. 1-1.2em / 16-19 px). Some dyslexic readers may request a larger font.
- Larger inter-letter / character spacing (sometimes called tracking) improves readability, ideally around 35% of the average letter width. If letter spacing is excessive it can reduce readability.
- Inter-word spacing should be at least 3.5 times the inter-letter spacing.
- Larger line spacing improves readability and should be proportional to inter-word spacing; 1.5 / 150% is preferable.
- Avoid Underlining and italics as this can make the text appear to run together and cause crowding. Use bold for emphasis.

- Avoid text in uppercase / capital letters and small caps, which can be less familiar to the reader and harder to read.

Headings and Structure

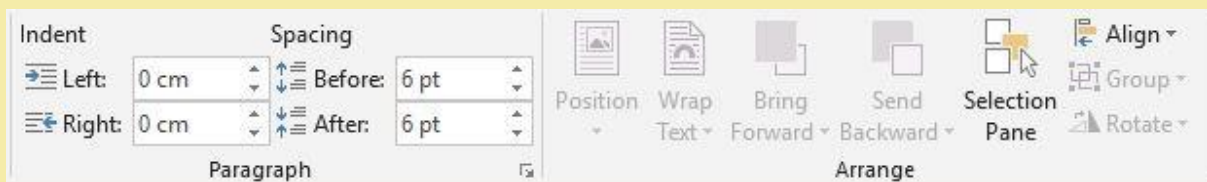
- Use headings and styles to create consistent structure to help people navigate through your content.

In Word, you'll find these tools in the 'Home' tab:



- For headings, use a font size that is at least 20% larger than the normal text. If further emphasis is required, then use bold.
- Use formatting tools for text alignment, justification, indents, lists, line and paragraph spacing to support assistive technology users.

In Word, you'll find these tools in the 'Layout' tab:



- Add extra space around headings and between paragraphs.
- Ensure hyperlinks look different from headings and normal text.

Colour

- Use single colour backgrounds. Avoid background patterns or pictures and distracting surrounds.
- Use sufficient contrast levels between background and text.
- Use dark coloured text on a light (not white) background.
- Avoid green and red/pink, as these colours are difficult for those who have colour vision deficiencies (colour blindness).

- Consider alternatives to white backgrounds for paper, computer and visual aids such as whiteboards. White can appear too dazzling. Use cream or a soft pastel colour. Some dyslexic people will have their own colour preference.
- When printing, use matt paper rather than gloss. Paper should be thick enough to prevent the other side showing through.

Layout

- Left align text, without justification.
- Avoid multiple columns (as used in newspapers).
- Lines should not be too long: 60 to 70 characters.
- Use white space to remove clutter near text and group related content.
- Break up the text with regular section headings in long documents and include a table of contents.

Writing Style

- Use active rather than passive voice.
- Be concise; avoid using long, dense paragraphs.
- Use short, simple sentences in a direct style.
- Use images to support text. Flow charts are ideal for explaining procedures. Pictograms and graphics can help to locate and support information in the text.
- Consider using bullet points and numbering rather than continuous prose.
- Give instructions clearly.
- Avoid double negatives.
- Avoid abbreviations where possible; always provide the expanded form when first used.
- Provide a glossary of abbreviations and jargon.

Glossary

Analogy Perception of similarity between two things. In spelling and reading using a known word to spell or read other words that have the same letter pattern, e.g. knowledge of 'night' may enable the child to spell/read 'fright' or 'sight'.

Attribution The ability to attribute achievement to one's own efforts. Characteristically dyslexics attribute success to luck rather than skill on their part. They need to be aware of the problem solving skills they apply to reading and writing and told when they are successful.

Auditory Discrimination The detection of sounds in phonemes, syllables and words. Children with poor auditory discrimination will have difficulty distinguishing sounds, recognising rhyme, identifying syllables and blending phonemes to make words. They will have difficulty using phonics to read and spell. These skills will need to be explicitly taught.

Auditory Memory The ability to recall a sequence of sounds. Children with poor auditory memory have difficulty building up words and learning sounds. Additional time and overlearning will be needed to help acquire these skills.

Blending The joining of phonemes to make words, e.g. 'c-a-t' to make 'cat' or 'cr-a-sh' to read 'crash'.

Cue 'a source of information. In reading, children may use contextual, grammatical, graphic and phonological cues to work out unfamiliar words.

Idioms are words, phrases, or expressions that cannot be taken literally. In other words, when used in everyday language, they have a meaning other than the basic one you would find in the dictionary. Every language has its own idioms. Learning them makes understanding and using a language a lot easier and more fun!

For example, "break a leg" is a common idiom.

Literal meaning: I command you to break a bone in your leg and you should probably go to the doctor afterwards to get it fixed.

Idiomatic meaning: Do your best and do well. Often, actors tell each other to "break a leg" before they go out on stage to perform.

Laterality Refers to right or left dominance, for example the hand used for writing or cutting, the foot used for kicking a ball and eye preference. Some children do not have a dominant side, for example they may be right handed but kick with the left foot. This is called 'Cross Laterality'.

Metalinguistic awareness The ability to reflect on and talk about language.

Metaphor is when you compare two things without using 'like' or 'is' e.g. Her eyes are jewels sparkling in the sun.

Miscue Analysis A method of assessing reading by examining errors.

Multi-Sensory Learning This technique uses visual, auditory and kinaesthetic inputs, i.e. the combined use of sight, sound, speech and touch, to help children read and spell. The approach is very structured with opportunities for reinforcement. The child learns to handle a small number of sounds and symbols before moving onto the next stage. He/she work from the known to the unknown by building on his/her existing knowledge.

Onset (As in onset and rime) The consonant or consonant cluster at the beginning of most words, e.g. 'dog' or 'string'

Phonological Awareness An awareness of sounds in words. A child who has difficulties with phonological awareness may find it difficult to identify rhyme and make analogies, clap syllables, identify phonemes within words, segment words into onset and rhyme.

Reading cues These are the strategies children use to help them read unfamiliar words. Early readers may use pictures, sound the initial letter or remember repetitive text. Older readers may segment words into phonemes, use analogy, reread sentence to predict unknown word, apply the rules of grammar and read on to access full sentence meaning. The N.L Strategy demonstrates this by the searchlight model.

Rime In single syllable words the remainder of the word after the initial consonant or consonant cluster, e.g. fox, stop or fright.

Segment To break a word down into its component phonemes.

Spatial Awareness The ability to orientate oneself or objects in relation to others. A child with poor spatial awareness may reverse letters or numbers, confuse left and right and have problems following directions or reading maps.

Visual Discrimination The ability to detect similarities and differences between visual patterns. A child with poor visual discrimination will confuse words that look similar, e.g. 'from' and 'form' and confuse similar looking letters e.g. b/d/p .

Visual Memory The ability to recall a visual image. A child with a poor visual memory will find it difficult to learn sight words, find it difficult to copy from the board and may spell a word in several different ways in the same piece of work, e.g. 'like' spelt 'lik', 'lic', 'lick' or 'liak'.