

SECTION 10

Maths

**Ideas and Suggestions to help you support your child
with Dyslexia at home**



MATHS & YOUR DYSLEXIC CHILD

Maths can be difficult for children with dyslexia. Just as a dyslexic child finds difficulty with making sense of written words it will follow that some dyslexics will have similar problems with learning the various signs and symbols which are used in maths. Numeracy has been described as literacy with numbers! Arithmetic, in particular, can be very troublesome. Arithmetic is largely to do with calculations but once early problems with this are overcome, many dyslexics can go on to be very successful mathematicians.

Your child may have difficulties with:

- reading the question
- simple calculations
- learning tables
- counting backwards
- adding up a column of numbers
- the direction of numbers when reading or writing them, eg. 51 instead of 15
- reversing numbers when writing them, eg. **3** as **Ǝ**
- understanding the language of maths, eg. more than/addition/less than
- remembering the correct order for carrying out maths calculations
- understanding place value, eg. will write 1006 for 'one hundred and six'
- learning or confusing symbols, eg. $\times/\frac{1}{2}/\div/ />$
- copying figures or putting numbers into calculators

- estimating
- recognising patterns

Overcoming these difficulties is possible but, as with reading and spelling, the dyslexic child needs to be given plenty of time and lots of little and often practice - with much talking and doing.

Do not discourage your child from using his/her own special methods.

Above all, it is important to be positive. Once your child has grasped the basics, he/she may well find mathematics to be exciting and enjoyable.

Strategies and Activities to Support Maths

- Maths games - especially for ordering and BASIC counting, make sure that the game allows the child a realistic chance of winning whilst providing an element of skill e.g. card games:
 - Snap/BeggarMyNeighbour/Rummy/Crib/Whist/Patience

- Multiplication using fingers
- Knowing that 7×8 is the same as 8×7
- Looking for patterns in the 5x, 10x and 11x table
- Table square - gives reinforcement through looking
- "What to do when you can't learn the Times Tables" - S.Chinn
- Use estimation and approximations - this will enable your child to think about how reasonable their "answer" is.
- Encourage using his/her own strategies - there is more than one way to do things

Multiplicaiion square

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Finger Tables

- A closed fist is 5
- One finger, or thumb, raised represents 6
- Two fingers raised represents 7
- Three fingers raised represents 8, etc

Example - 7×8

One hand - 7



Other hand - 8



To get the answer...

- Add raised fingers for the 'tens' so...
 $2 + 3 = 5$
 $5 \times 10 = 50$
- Fingers not raised in one hand are three
- In other hand there are two
- Multiply these numbers...
 $3 \times 2 = 6$

Add them all together - $50 + 6 = 56$

Magic Square

Use each of the numbers 1 to 9, once only to complete the square below so that every row, column, and both diagonals add up to 15

Count Down from Twenty

Take 20 straws, Cuisenaire Rods (1cm^3), counters, or similar, and place on the table. Take it in turns to pick up either one, two, or three counters each time. The winner is the one who picks up the last counter

Count Up to Twenty

Share a pencil and paper. Starting with 0, each player, in turn, adds either one, two or three. The winner is the one who 'lands' on twenty.

This can be expanded using a larger goal, for example 100, and numbers up to 10 (or to nine which requires more difficult addition)

Card Games

There are many card games and books available giving many examples. Below are a few games that do not take too long to play

1. For two players. Snap - a) when the face value of the cards are the same
b) when the two cards add up to 10
(remove all cards of value 10 and all court cards)
2. For one player. Elevens - Remove court (picture) cards from a pack of playing cards. Deal eight cards, face up, and look for pairs of cards that total eleven. When a pair is found, deal a new card to cover each of the pair and look for a further pair. Continue until all cards are used, when player wins, or until no more pairs can be seen.
3. For one player. Fifteen. Similar to Elevens, but uses all the pack. Deal sixteen cards, four rows of four. The player has to find any number of cards, in the SAME suit to make a total of 15. Ten, Jack, Queen and King MUST go together, ten cannot be used with any other playing cards. Cards totalling 15 are picked up and replaced by further cards. Play continues until all cards are used, in which case the player wins. If no totals of 15 can be seen, ONE extra card can be laid to see if 15 can be found. If not, then play ceases and the player loses.

Five Coins

Place five coins of the same value, e.g. five 2p's, on a table in the pentagon pattern shown below.



Slide one coin; do NOT lift it off the table. Slide it to a new position ensuring that it touches two other coins when finally positioned. Repeat with two other coins (three moves all together) finish with the coins arranged as shown below.



Basic Mathematics Vocabulary

Above	Add	Added	Addend	Addition
After	Altogether	Amount	As many as	
Back	Backwards	Before	Behind	Below
Beside	Black	Blue	Bonds	Both
Bottom	Bought	Box	Brown	Buy
Change	Check	Circe	Coin	Colour
Column	Corner	Cost	Costs	Count
Count back	Count on	Cube		
Dark green	Different	Die	Dice	Dominoes
Down				
Each	Edge	Eight	Eighth	Empty
Equal	Equals			
Face	Fewer	Fewer than	First	Five
Fifth	Forwards	Four	Fourth	Front
Greater than	Greatest	Green		
Height	How many	How many times	How much	
In	In front of	Inside	Is equal to	
Large	Larger	Largest	Least	Left
Length	Less	Less than	Light green	Line
Long	Longer	Longest		
Match	Middle	Money	More	More than
Most				
Next	Nine	Ninth	None	
Not as many	Nothing	Not the same	Nought	Number

as				
Number bonds	Number line			
One	On top of	Orange	Order	Out
Outside	Over			
Pence	Penny	Price	Purple	
Question				
Rectangle	Red	Right	Round	
Same	Second	Seven	Seventh	Shape
Short	Shorter	Shortest	Side	Sign
Six	Sixth	Size	Small	Smaller
Smallest	Sort	Spend	Spending	Spent
Square	Subtract	Subtraction	Sum	
Take	Take away	Ten	Tenth	Thick
Thin	Third	Three	Tick	Top
Triangle	Two			
Under	Underneath	Up		
White	Wood	Wooden		
Yellow				
Zero				

Maths and Dyslexia - Some Resources

- Maths Dictionary - Delaney, Pinel, Smith - Question Publishing Co. 1-898149-70-4
- Either Using the Cuisenaire Rods - A photo/text Guide for Teachers - Jessica Davidson Cuisenaire - 91404-04-9 - Available from Amazon Books or etacuisenaire.com
- Mathematics with numbers in colour - C. Gattengno - available from The Cuisenaire Co. - 40 Silver Street, Reading, RG1 2SU
- Primary Mathematics - Knowledge and Understanding - C. Mooney, L. Ferrie, S. Fox, A. Hanson, R. Wrathmell - Learning Matters - 1-903300-0307
- Basic Topics in Mathematics for Dyslexics - Anne Henderson and Elaine Miles - Whurr Publishers - 1-86156-211-X
- Maths for the Dyslexic - A Practical Approach - Anne Henderson, David Fulton - 1-8615-043-5
- Maths for the Dyslexic - A Teaching Handbook (Second Edition) - Chinn and Ashcroft - Whurr Publishers - 1-86156-043-5
- Elementary Mathematics and Language Difficulties - Eva Grauberg - Whurr Publishers - 1-86156-048-6
- Dyslexia and Mathematics - Edited by T R Miles and E Miles - Routledge - 0-415-04987-3

- What to do if you can't learn tables - Chinn - From Mark Co. Mark College, Mark, Highbridge, Somerset - Also available on CD Rom. Also - What to do if you can't learn number bonds.
- 30 Second Challenge - Five books for drill and practise of basic number - 0-7214-3446-0 - Cheap from WH Smith - Use with care!
- Memory Cards - Sutton Dyslexia Association - Memory Cards - 21 Princes Ave Carshalton
- Specific Learning Difficulties in Mathematics - a classroom approach - Olwen El-Naggar - NASEN - 0-9730-81-3
- NumberShark - computer program - Whitespace - Available from AVP software
- Maths Circus (1 - 4) - computer program - 4mations - Available from AVP software
- Dominoes and other ideas for practise of time and number - available from Taskmaster, Morris Road, Clarendon Park Leicester.
- Math Magic - Paul Godding - Board Game from Po Box 260, Newport, South Wales NP20 4XR
- Number Activities and Games 3rd Edition - R. Edward, A. Williams, P. Baggaley - NASEN - 0-906730-54-6

Resources

- Stile Maths
- Maths for the Dyslexia - A. Henderson
- Fraction Cubes - Learning Resources
- Mathematics Solutions - An introduction to Dyscalculia - J Poustie
- NumberShark
- Ashcroft Maths Scheme