INFORMATION AND RESOURCES



Supporting you to find the answers

Maths Learning Difficulties (MLD) and Dyscalculia

Many people admit that they dislike or are bad at maths. But for a child or young person with Maths Learning Difficulties (MLD) or Dyscalculia, it is much more complex than this. MLD is an umbrella term that is used to describe problems with learning number facts and applying them in mathematical tasks as well as difficulties carrying out mathematical procedures such as written calculations.

Research suggests that up to 25% of children may struggle with maths at school. This may be because of a lack of understanding in one particular area due to absence, poor teaching or a misconception. Typically, such children will make improved progress with good 'quality first' teaching in the classroom which develops their understanding, addresses misconceptions and allows them to move forward with their learning. As their mastery of maths improves, so does their confidence and these children will be 'back on track'.

For children exhibiting MLD, additional support may be needed, usually this will take the form of a maths intervention programme to delve deeper into misconceptions and re-teach key mathematical concepts using a range of multi-sensory resources. Sometimes MLD can be a result of a co-occurring neurodevelopmental condition such as ADHD, dyslexia or dyspraxia. Children with MLD will usually respond well to targeted intervention programmes. If not, this can be a sign of dyscalculia.

Dyscalculia Definition

Research into dyscalculia and its causes is still at an early stage and it was only in 2019 that a research-based definition was developed in order to help identify learners with the condition: 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.

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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 mathematics 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 can also co-occur with other specific learning difficulties, mathematics anxiety and medical conditions.

Some of the main indicators of dyscalculia include a lack of number sense, the inability to subitise (immediately recognising the number of items in a small set without the need for counting), poor estimation and counting skills, difficulty learning number facts, inability to tell the time or use money, left and right confusion, difficulties with spatial reasoning including understanding directions and maths anxiety/avoidance of maths tasks. Dyscalculic learners will often be achieving well in other areas of the curriculum but will have had difficulties with maths from an early age.

(SASC/ BDA 2019)

Maths anxiety is "A negative emotional reaction to mathematics, leading to varying degrees of helplessness, panic and mental disorganisation that arise among some people when faced with a mathematical problem." (Maths Anxiety Trust).

It usually accompanies MLD and dyscalculia and causes a vicious cycle of poor performance and low self-esteem in maths which can only be overcome with support and encouragement to break down the fear associated with the subject. Often, once it has been addressed, the learner's progress in maths improves significantly with increased memory capacity and focus because the flight/fright/freeze response has been removed.

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