Supporting children with a Specific Learning Difficulty (Dyslexia)
Learning of Mathematics

Be aware that:
Dyslexia does not just affect literacy it can affect mathematics in the following ways:

- Working, long-term and short-term memory deficits affect efficient learning of number bonds, tables and mental calculations.
- Language decoding and comprehension deficits make it difficult to understand and access written verbal problems and to master the "language" of mathematics.
- Sequencing problems make it difficult for a child to sequence procedures to arrive at an answer and make it difficult to explain how they got to the answer.
- Speed of processing difficulties: Work in the classroom often goes too fast and doesn't allow for sufficient practice. There is a need for over-learning. Allow lots of time to think and discuss.

**Remember**: Children need to understand and accept that making mistakes is part of learning so it is important to develop a positive, enquiring approach to mistakes.

**Number:**

- Use multi-sensory methods to help learners with counting, distinguishing symbols and mathematical operations.
- Number skills development is cumulative. Do not move on until sound foundations are established.
- Use visual aids e.g. fraction wall.
- Squared paper and layout in general can help preserve place value and simplify operations.
- Work with concrete materials whenever possible and relate to life experience (sport, farming etc.).
- Allow time for over-learning number facts and reduce memory load by using commutative property and building facts on “older” well known facts.
- Encourage children to estimate, calculate and check answers.
- Mathematical concepts are abstract concepts which are largely mediated verbally. Successful learning involves a lot of oral work.
- Experience using concrete materials and play helps facilitate verbal understanding.
Calculation:
- Encourage the use of “jottings” to prevent them losing track mid process. Allow use of fingers or other memory aids.
- Get learners to talk through what they are doing as they work, always using the same mathematical language. This helps both calculation and mastering of “language of maths”.
- Take care not to over emphasise the mechanics of maths at the expense of meaning. Take a “big picture” or global view of calculation as it can draw on the learner’s strength.
- Estimation should be employed.

Solving Problems:
- Explain Mathematical vocabulary and build up a maths “dictionary”. Whenever possible, use images or examples from a real context. Make sure language is understood before attempting a problem.
- Children bring a lot of “everyday mathematics” into the classroom (money, marbles, darts, card games) which can be used to help access “classroom mathematics”.
- Use a “study buddy” if problems need to be read or re-read.
- Encourage children to try their own methods even if they prove to be unsuccessful.

Measures, Shape and Space:
- Dyslexic learners may find drawing shapes challenging. Supports such as joining dots or modelling in plasticine add a multi-sensory approach.
- 98% of everyday maths involves money, time, weights and measures. Therefore these are the most important of topics.
- Many dyslexic children have problem with time concepts so revisit these topics at regular intervals.

Standardised Assessment and Diagnostic Testing:
- Dyslexic children may need accommodation when doing standardised tests of mathematics. Reading problems to the child will help differentiate between reading difficulty or difficulty with the problem set.
- Diagnostic testing can help in the setting up of specific targets relevant to IEPs/ Support Plans in Mathematics.