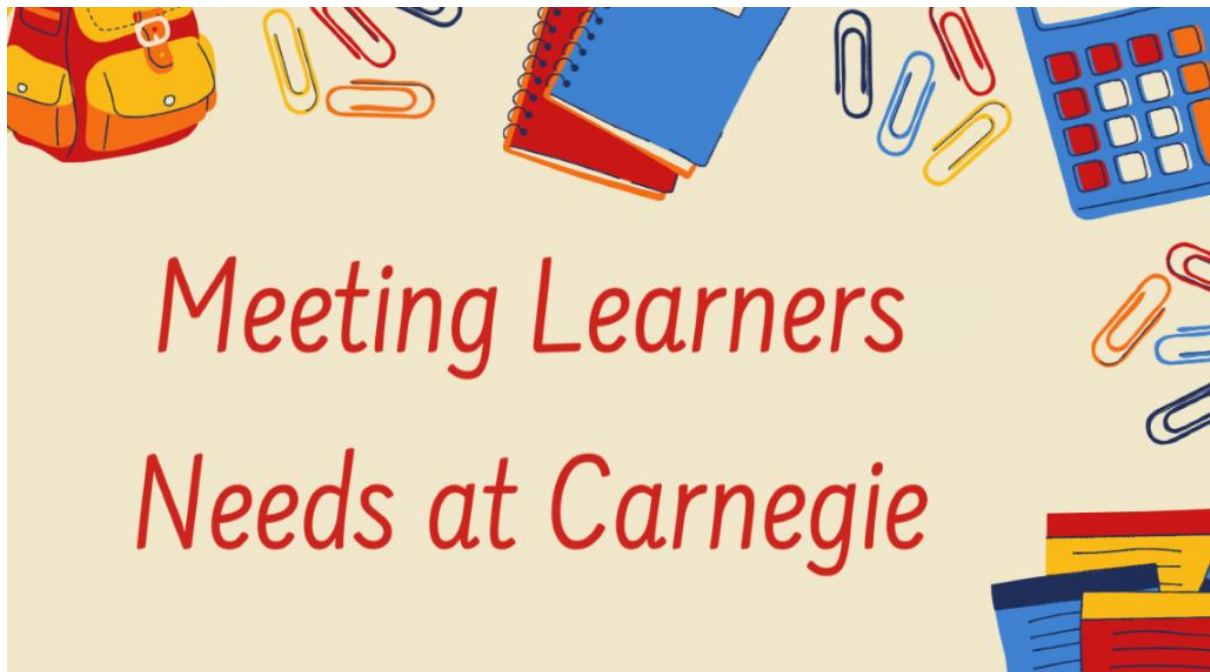


Carnegie Primary School



Dyscalculia Toolkit

What is in this toolkit?

This toolkit provides a range of suggested supports to help children with Dyscalculia while learning at home.

The toolkit can be used for reference to support learning at home.

If you have any further questions, please get in touch with Carnegie's Support for Learning Team.

What is Dyscalculia?

Dyscalculia affects an individual's ability to acquire numeracy and mathematical skills despite appropriate learning opportunities. Learners with dyscalculia may have difficulty understanding basic number concepts, number facts and procedures.

These learners will lack an intuitive number sense, described as the ability to manipulate or compare quantities or numbers. Learners may also have difficulties with sequencing, aspects of algebra, geometry and other areas of the mathematics curriculum including using money and time.

Dyscalculia occurs across ability levels and socio-economic groups. Dyscalculia often co-exists with other specific learning difficulties, particularly dyslexia and ADHD.

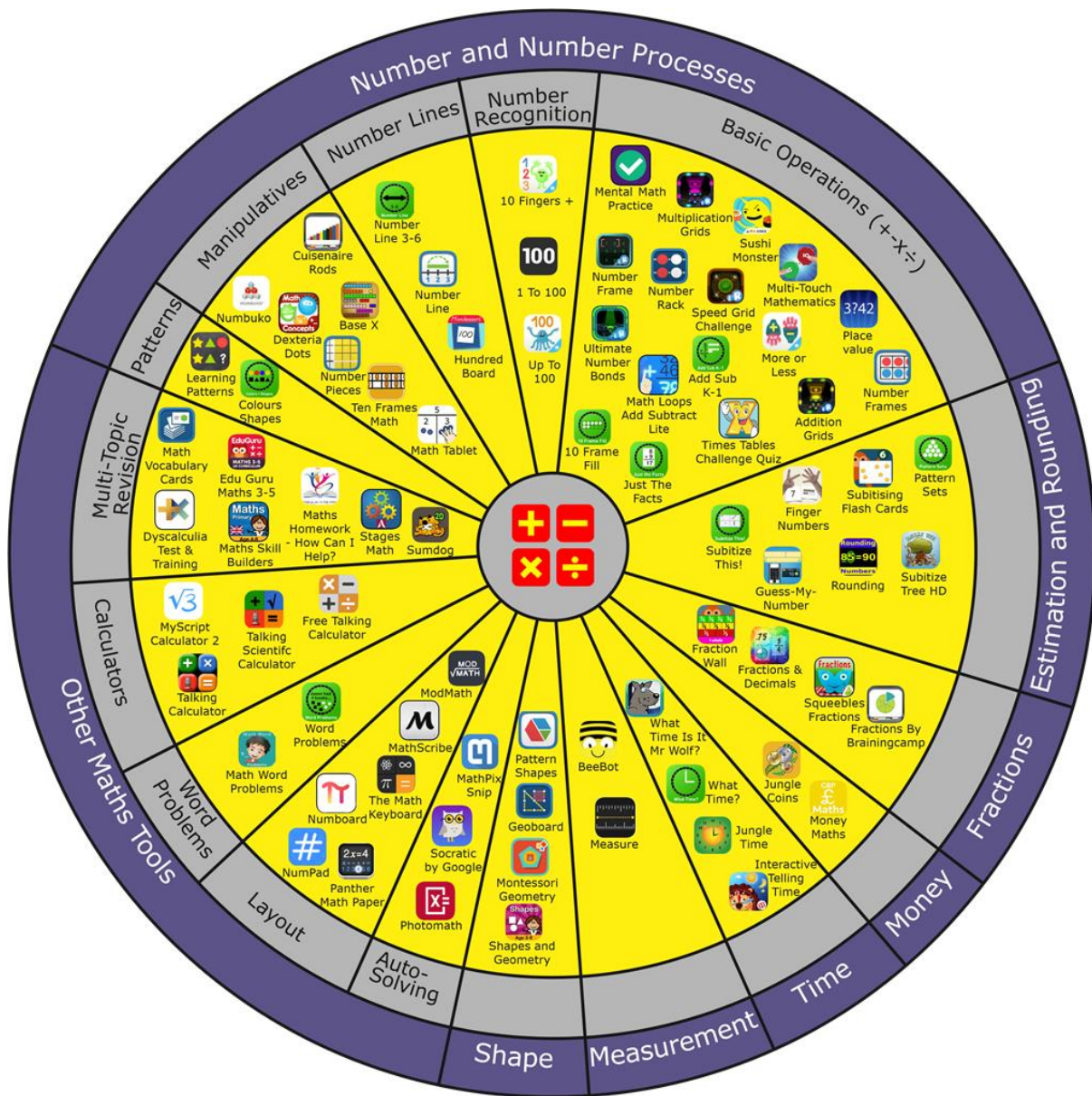


Strategies to support

- ❖ Subitising is the ability to enumerate a random array of objects at a glance without counting. Provide dot patterns to aid number recognition and counting skills.
- ❖ Present numeracy through meaningful contexts (e.g. shopping & money).
- ❖ Decompose numbers, breaking them down into more easily manageable parts (e.g. 16 becomes 10 and 6).
- ❖ Model processes when helping your child. Encourage your child to verbalise their learning.

- ❖ Recap prior learning (over-learning) and build new learning in a cumulative manner (i.e. step by step).
- ❖ Record thinking to support weak working memory (paper or whiteboards)
- ❖ Use concrete materials to visually support understanding of concepts (e.g. number square, number lines, dot patterns, tables square, numicon, money etc)
- ❖ Focus on inverse relationships of concepts (e.g. addition and subtraction alongside multiplication and division) at the same time in order to stress connections
- ❖ Be prepared to learn different strategies for working out a mathematical problem. Learners often apply different strategies to work out the same problem (e.g. multiplication and division - using repeated addition and arrays).
- ❖ Use money when teaching place value and the concept of exchange.
- ❖ Use number lines. Progress from pictorial, to numbered, to empty number lines.
- ❖ Work with small numbers when learning a new concept.
- ❖ Use ICT (See diagram over the page of useful apps for those with dyscalculia or numeracy difficulties).

Apps for Learners with Dyscalculia/ Numeracy Difficulties



Further Reading

- www.dyscalculia-maths-difficulties.org.uk
- www.dyscalculia.org.uk
- www.aboutdyscalculia.org
- www.mathematicalbrain.com
- www.dyscalculia.me.uk
- www.dyscalculiainfo.org
- www.callscotland.org.uk (visit their list of maths apps)
- www.standards.dfes.gov.uk
- www.bbc.co.uk/skillswise/tutors/expertcolumn/dyscalculia
- Dealing with Dyslexia: Sum Hopeby Steve Chinn
- Dyslexia, Dyscalculia and Mathematics by Anne Henderson
- Exploring Numbers Through Dot Patterns (2013) eBook RonitBird
- Exploring Numbers Through Cuisenaire Rods (2013) eBook RonitBird
- Understanding Times Tables (2014) eBook RonitBird