



Numbers

To learn about and understand numbers, children need to develop a sense of what numbers mean (cardinality of numbers), including zero, not only be able to memorise and rote count, otherwise they will not be able to use them in real world situations.

Number work can be tricky for children with Down syndrome, as numbers can be a very abstract concept to grasp! Take things slowly, with lots of repetitions and practice. Use the amazing visual learning skills of the child you are working with to enhance learning opportunities by incorporating resources such as **Numicon** and other resources in your lessons.

To begin with, let children play with plastic numbers and Numicon shapes in the sand and water trays, freeze them into ice cubes and let them thaw in the water tray, hide them in a feely bag and take turns at pulling each of them out and naming them (with support) and cover the Numicon base boards with the shapes etc, all before moving on to counting.

Sorting activities

Plan sorting activities, can you sort the blue blocks from the red blocks or the large balls from the small balls etc? A great activity to play at home with sorting and matching socks!

Mention and bring attention to numbers in the environment, bus numbers, numbers on a front door or on the face of a clock or timer etc.

Make sure the mathematical language that you use is not interchangeable. For instance, don't substitute the word *small* for *tiny* or *big* for *large* until full understanding of initial words is reached.

Prepositions using toys and props

Can you put the doll in the box?

Can you put the doll under the chair?



3 rules of counting

1

Count everything once

2

**Say the numbers
in the right order**

3

**The last number you say is
how many there are
(the stopping number)**

Progressions in counting



☆ Count things of identical appearance



☆ Count things that can be thought of as the same but are not identical such as the same type of item but different colours or other non-interfering variables



Recognising and creating patterns

A pattern is any sequence that repeats itself at least twice.

By understanding patterns children can begin to make predictions about what comes next. Although noticing patterns can be tricky for children with Down syndrome to begin with, it is worth practicing as it is an important skill to develop and use into adulthood.





Maximise opportunities for counting

- ▶ Count the steps as you go upstairs and then backwards to zero as you come back down them.
- ▶ Count jumps or hops.
- ▶ Count objects in the environment such as children in a classroom, lunch boxes on a shelf, dinosaurs in the water tray etc.
- ▶ 5 Currant buns
- ▶ 10 Cheeky Monkeys Jumping on the Bed
- ▶ 10 Green Bottles
- ▶ Use story books such as
 - ▶ Ten in the Bed by Penny Dale
 - ▶ How Many Legs? By Key Gray
 - ▶ One Fox by Kate Read

Use number songs and rhymes such as

- ▶ 5 Little Ducks
- ▶ 5 Little Men in a Flying Saucer
- ▶ 5 Speckled Frogs
- ▶ 12345 Once I Caught a Fish Alive
- ▶ 10 Fat Sausages

For more detailed information and support we recommend Maths for Life.

Use short, fun activities, lots of visual resources and praise. End the session on something that the child can succeed in completing successfully so there is no reticence about returning to similar work in the future.



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