

Sensory Engagement and the development of early cognition.

In the early stages of development sensory stimulation is critical to the wiring of the brain.

Early sensory experiences trigger the creation of neural pathways in the mind.

The more pathways created during this early stage of development the greater the potential for the brain in the future.



The Sensory Projects run on the principle that with the right knowledge and a little creativity inexpensive items can become effective tools for sensory inclusion.

Through the work of all the Projects founder **Joanna Grace** is seeking to contribute to a future where people are understood in spite of their differences.

To learn more about the projects, and to access free resources and information about bespoke sensory training visit

www.TheSensoryProjects.co.uk

Joanna's books: **Sensory Stories for Children and Teens** and **Sensory-being for Sensory Beings** are available on amazon, with more titles due for publication in 2018.



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One and Many



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One and many

Many of the guides in this series focus around early language and literacy skills, communication is so fundamental to our ability to be able to connect with and be included by others. But the foundations of mathematical are also valuable, and having the opportunity to practice these from early on has the potential to support your later mathematical abilities.

Oftentimes judgements will be made about your skills in other areas of learning based on your skills in language and literacy. It can be assumed that because a child cannot, for example, talk, that they also will not be able to understand other topics, will not be able to do maths etc. The base assumption is that if your language and literacy skills are not up to scratch that your cognitive abilities overall are in doubt.

Identifying and playing to your strengths is a great thing for any person to do. Perhaps you are not so good at language, maybe you are a great mathematician!

Here are two great early developmental ways of practicing mathematical skills.

One and many

The foundation of an understanding of number is an appreciation of quantity. This is best learned through experiences of contrast, for example it is not so easy to recognise that quantities change if shown five of an item and six of an item. Presented together five of something and six of something are going to look pretty similar, you would not necessarily spot the difference in quantity. So what you are looking to offer to people is experiences of one and many, and to make these as bold as possible. You can draw on all the senses to amplify this awareness. Here are some ideas:

A single ball and a whole box of balls.

A large bubble and a cloud of tiny bubbles.

A pencil and a box of pencils.

One crisp and a bag of crisps.

A single note and a scale of notes.

With anything you do think of how you can use the senses to highlight the difference, so for example for the first one what about using brightly coloured balls that stand out to the visual sense and presenting them in a plain cardboard box so they are easy to identify.

Pattern

Mathematics is fundamentally about identifying patterns, and experiencing pattern through your senses exercises the part of the brain that may later use its understanding of pattern to do multiplication or even complex algebra.

Here are some ideas for sensory explorations of pattern:

A string with large coloured beads that can be manipulated presented in a simple repeating pattern .

Creating patterns out of toys as you play, for example creating an alternating pattern out of cards by laying them down one face up, one face down, one face up and so on.

Listen to repeating patterns in music.

Experience a subtle smell being presented to the nose and then removed and then presented and so on.

Arranging food in a pattern on the plate and eating in order.

