

## 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](http://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.



The Sensory Projects

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## Spectacular Set Shifting.



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The brain's ability to set shift is one of its spectacular underpinning functions to our ability to interact successfully with the world around us. It takes us a while to secure it, with most typically developing people's brains only fully getting the hang of it in late childhood/early adolescence. But as with so many things achieved in later development its roots begin in our early experiences and in this leaflet we are going to consider one possible way in nurturing these roots.

### What is Set Shifting?

Set Shifting is the brain's ability to move between one set of cognitive strategies to a new set in response to changes in the environment. We need to be able to do this in order to achieve all sorts of other things, for example it underpins our ability to pay attention, it is fundamental to our ability to behave in a socially acceptable way when faced with challenges and it is utilised by the brain when it tackles mathematical problems.

## The Frontal Lobe Deficit and Set Shifting.

Unsurprisingly the frontal lobe is the part of the brain at the front of our skull, it is the part of the brain just behind your forehead. The frontal lobe is the home of set shifting. People with various conditions can experience impairment to their frontal lobe abilities and this will in turn affect their capacity to set shift. For example people with Parkinson's Disease, Foetal Alcohol Spectrum Disorder, Autistic Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Obsessive Compulsive Disorder, Epilepsy and individuals with specific brain injury to the frontal lobe can all experience impairment to their frontal lobe capabilities.

The brain is a fantastically adaptable organ, and it may be possible to improve abilities in areas that are impaired by practicing the underpinning skills. Meaning that for people at risk of frontal lobe deficits there is extra potential at stake in these Spectacular Set Shifting activities.

### How do I play at Set Shifting?

Create play environments which give the brain the opportunity to view one set of resources, or one environment in multiple ways. Be sure to secure the understanding of the person you are supporting for each phase of your game. Don't shift before they have 'got' the first phase.

## Activities ripe for Set Shifting exploration.

- Choose a toy or resource that the person you support regularly plays with. Invent a totally new way of playing with that toy, for example if they regularly build models out of toy bricks, show them how to colour in a drawing on the floor by filling areas with different colour bricks.
- Use a stacking toy to print make.
- Build sandcastles out of sand, and then spread sand in a tray and write in it.
- Turn a piece of furniture upside down and use it in a different way, e.g. turn a chair from a seat into a small den.
- Line a selection of toys up and use them as musical instruments by bashing them with a stick or shaking them to create a sound.
- Make a grated cheese sandwich by sprinkling grated cheese onto a plate, buttering the bread and then pressing it buttered side down into the cheese.