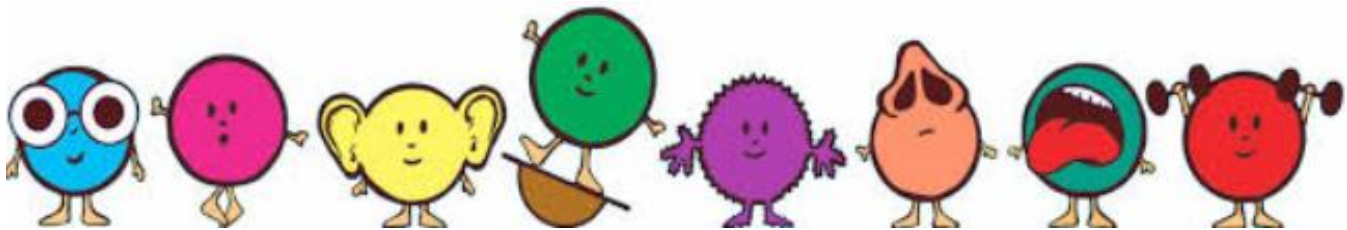


Occupational Therapy Service for Children & Young People



Sensory Information Pack

Name:

Date of Birth:

Therapist:

This information pack includes information about:

- Sensory Processing
- External Senses
- Internal Senses
- Interventions
 - Sensory Diet
 - Alert Programme
 - Alertness Self/Regulation
 - Zones of Regulation
- Useful Reading

If you have queries on any aspect of this document please feel free to contact the occupational therapy service on: 01925 867 858.

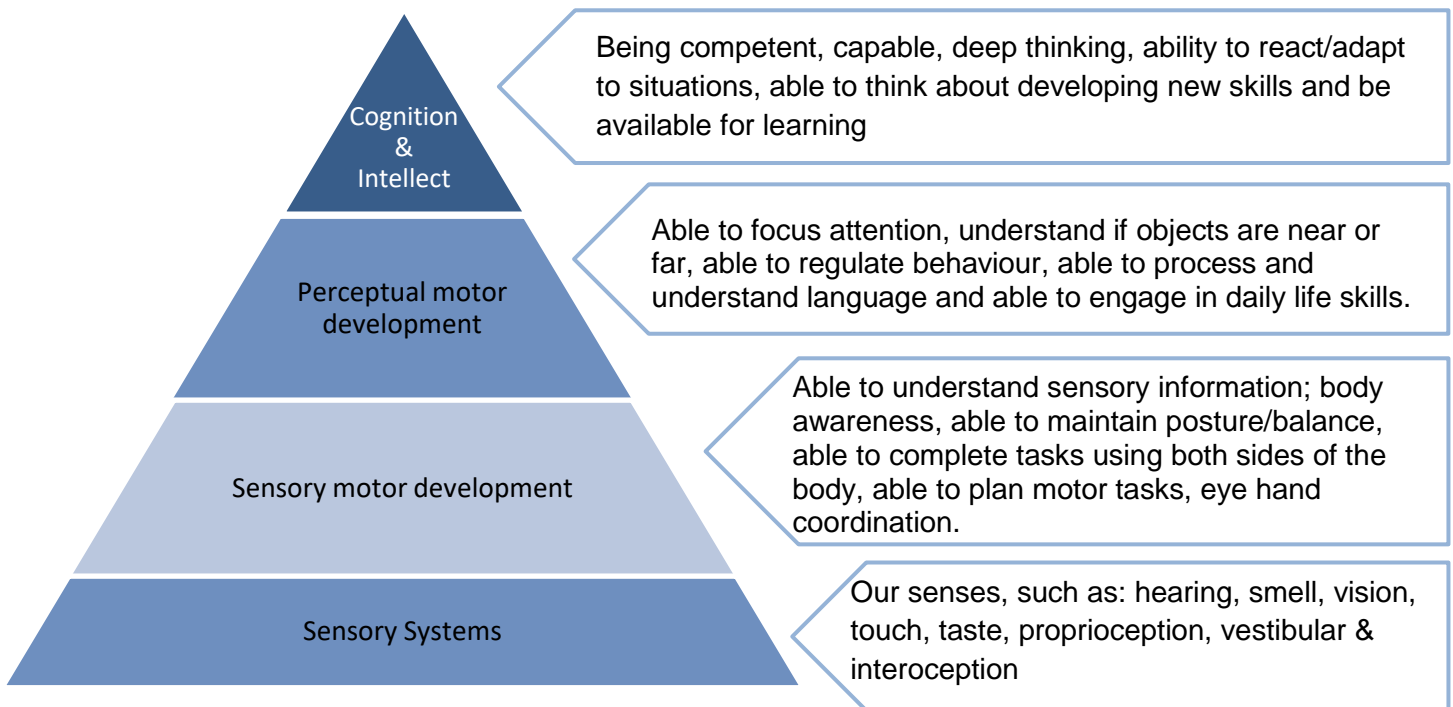
What is Sensory Processing?

Sensory processing is how we use information from within our bodies and the environment around us. It allows our senses to work together to deal with different incoming sensations. The more difficult a task or activity is, the more our different senses need to work together; this known as “sensory integration”.

Our senses provide us with the information we need to carry out day-to-day tasks and activities. This sensory information gives us an understanding of who we are, where we are and what is going on around us.

As babies, our development begins with the sensory skills we master, one by one, step by step, such as hearing, smell and vision (Sensory Systems). If the building blocks are not fixed in place at the beginning, our onward development may not progress as it should.

The Learning Pyramid below shows the way we ‘organise’ the things we experience from the world we live in. You could say our senses are the building blocks for all the skills we learn and use in our daily lives. As we grow, we are able to do more. It is important to keep in mind that each new level is only as good as the block it rests upon.



Adapted from the Pyramid of Learning (Williams & Schellenberger)

Children with sensory processing challenges/differences may struggle to understand what is happening both inside and outside their body. Children may experience these sensory processing differences without a diagnosis or alongside a diagnosis such as an Autism Spectrum Condition (ASC)/ADHD.

They may:

- Find it difficult to communicate how they feel.
- Become disorganised due to problems processing and understanding all of the sensory information.
- Need to learn ways to help them to cope and function.

There are two types of senses: **external** and **internal**.

External Senses



The external senses rely on information coming from outside of the body. There are five “external senses”.

- Sight/Visual
- Hearing/Auditory
- Smell/Olfactory
- Taste/Gustatory
- Touch/Tactile

Sight (Visual System)



The movements of our eyes are controlled by muscles. These muscles allow us to follow moving objects with our eyes, fix on an object, scan a page of writing and focus our eyes on one object and then move to another and re-focus quickly. This visual processing allows us to make sense of what we see.

What you might see	Activities/ideas to try
Focuses on a tiny part of a toy or object and not whole thing.	Talk about the object and its parts. Encourage the child to draw the whole object or toy.
Has difficulty noticing objects in their peripheral field of vision (away from the centre of their gaze).	Encourage the child to scan their environment – play games such as I-spy.
Becomes more erratic or disorganised when in a busy/visually stimulating environment or is visually distracted by others.	Work in a quiet area away from distractions for short spells during the day. Set up a separate work area or work station, use a portable desk border/corral.  
Difficulty scanning pictures on a page.	Use a finger or pointer tool on the page to help scan and find what the child is meant to be looking at/for.
Gets excited with toys that flash/spin. (These could be being used to aid ‘zoning out’ when overloaded).	Limit the use of flashing light/spinning toys. Use these toys as motivators for short periods only. Distract them and use calming activities and purposeful activity instead.
Shows sensitivity to light or is irritated by bright lights.	Use low level lighting - dimmer switches. If outdoors, encourage the child to wear a cap or sunglasses to reduce the level of visual stimulation. Position the child away from windows when working. Use blackout blinds or blinds in the room; this may help the child to feel more in control of light levels. Apply window sun screens/filter protection.
Visually stimulated by reflective surfaces.	Ensure laminated visuals are made using matt laminating pouches. Allow periods of sensory play using fibre-optic lights and mirror play, ensuring they are time limited so the child does not become over-stimulated.

Hearing/sound (Auditory System)



Auditory processing refers to how the brain recognises and makes sense of sounds. Sounds are made up from loudness, pitch, where a sound is coming from and how long it lasts. We may need more or less noise in our environment in order to help us focus on a task. The way we process what we hear allows our brains to recognise and makes sense of sounds.

We may need more or less noise in our environment in order to help us focus on a task.

Children who have hearing/sound processing difficulties may find noise painful if they are hyper-reactive or over-responsive. They may not register sounds if they are hypo-reactive or under-responsive.

What you may see	Activities/ideas to try
Fearful or runs away from loud, unexpected noises, such as a hairdryer, washing machine, fire alarm.	<p>Help the child to find where the sound is coming from. Limit the amount of time the noise is around them. Encourage the child to be in control of operating the device, as this can reduce their anxiety. To start with, let them stay at a distance but in the same room. Give them an escape area, such as a pop up tent or a quiet zone. Use proprioceptive/heavy work activities before or when the sound is present, as this will help to calm and organise their sensory system. Use ear defenders, noise cancelling headphones or concert ear buds e.g. Vibes.</p>
Hums, sings and covers ears.	<p>This is known as 'blocking' and means the child is struggling to process the sounds they are hearing and they are using this strategy to self-soothe/self-regulate. Try to identify what sounds/noises are influencing their behaviour. Use proprioceptive activities to help calm and organise them.</p>
Does not appear to hear you when being spoken to – 'tunes out'.	<p>Have the child's hearing checked before considering if it is a sensory issue. Work on 1:1 basis or in small group; to cut down auditory distractions. Do not walk around the room / class when giving instructions or asking questions. Work at child's eye level to start with until you know they are listening and following your instructions. Ask child to repeat instructions or tasks requirements. Use visuals to support your instructions.</p>
Gets frustrated by busy noisy environments.	<p>Go to busy places during quieter times, such as during quiet supermarket times, cinema/trampoline quiet sessions. Use ear defenders, ear buds, noise cancelling headphones or headphones with music.</p>

Finds it hard concentrate or focus in a noisy environment.	Try to limit noise levels for focused pieces of work or activity. Use fidget toys as a calming tool. Use proprioceptive/heavy work activities.
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Smell (Olfactory System)



Smell is closely linked to our sense of taste. Consider how bland food tastes when we have a cold for example.

There are typically two different kinds of difficulties that may occur, the first being a hyper-reactivity/over-responsiveness to smells and the second a hypo-reactivity/under-responsiveness to smell.

What you may see	Activities/ideas to try
Becomes anxious by the smell of foods/cooking or other smells in their environment.	Show the child the food or meal being cooked. Show them where/what the smell is coming from. Get the child to help prepare the food and take part in the cooking process; this will help them to get used to the different smells. Use 'Smencils' (scented pencils) or other smell diffuser items or objects – the child can use these as a distraction to any smells they dislike. Let the child have their favourite scent or an object that they like the smell of, to block out the offensive smell e.g. a sweatband with aromatherapy oil or perfume on or a small smell pot, containing cotton wool infused with an essential oil.
Becomes distracted by smells that most people do not even notice.	Encourage people around the child to wear the same smells, such as the same deodorants, perfume and after shaves. Try to use odour free products for washing clothes, household cleaning and school cleaning. Avoid using sprays/aerosols close to the child.
Craves certain smells, frequently holding non-food items to their nose to smell such as crayons and toys.	Use scratch-n-sniff books, scented play dough, scented toys, scented bubbles, scented markers/'smencils', scratch-n-sniff stickers. Play a smelling game - set up 'smell pots' and ask the child to guess the different smells.

Taste (Gustatory Oral System)



Taste begins on our tongue when the food we eat softens as we chew. There are four basic taste sensations: sweet, sour, bitter, and salty.

There are two different kinds of difficulties that may occur with taste. The first is a hyper-reactivity/over-responsiveness and the second is a hypo-reactivity/under-responsiveness.

It is important to note the 'mouthing' of objects is a normal stage of infant development. Babies explore with their mouths and move to exploring with their hands as their tactile (touch) sensory system develops.

What you may see	Activities / ideas to try
Child gags or shows a dislike to certain tastes.	Use proprioceptive activities to help calm the child. Build a predictable routine into mealtimes with preparatory activities such as breathing, oral-motor exercises, and physical games providing deep pressure sensations. Seek specialist occupational therapy advice regarding oral desensitisation techniques.
Child dislikes food with different texture/consistencies, such as pasta with sauce.	Use proprioceptive activities to help calm the child. Gradually introduce child to new foods with different levels of texture i.e. one teaspoon at a time. Give them a sip of cold water before eating to help reduce sensitivity.
Dislikes foods with strong flavours and prefers bland foods.	Understand the child may not like certain flavours – never force them to eat something they do not want to. Gradually introduce the child to new foods with different flavours. Change food utensils (spoons, forks) to make eating the meal more fun. Use proprioceptive activities to help calm the child. Sucking foods/using spouted water bottles can be calming.
Likes sweet, spicy, sour or salty foods or adds extra flavour such as ketchup.	Encourage the child to try a wider variety of tastes and new foods; introduce new flavours gradually.
Chews on non-food items.	The child could still be in the exploring stage of their play development (using their mouths to explore). Encourage the child to explore the toy through touching with their hands rather than their mouth. Give them different objects, such as specialist chew tools or chewlery. Discuss with your General Practitioner/Paediatrician if the child is constantly eating non-food items.
Overfills their mouth.	The child is not sensing food in their mouth until it is full. This may be a sign of hypo-reactivity/under-responsiveness of the mouth. Supervise meals for safety and limit the amount of food on their plate/cutlery. Encourage them to put their cutlery down between each mouthful until they have swallowed. Play oral-motor games that involve blowing, sucking and chewing, as these help to improve sensory awareness of the mouth.
Dislikes teeth cleaning.	Check there are no dental issues causing any discomfort. Use a timer when cleaning teeth, so the child has a clear start and finish time. Experiment with a variety of different tooth-brushes such as manual, electric, themed brushes (Cinderella, Thomas or Bob the Builder).

Touch (Tactile System)



Our sense of touch (tactile sense) comes from receptors in our skin and within our mouth.

The tactile system is responsible for all the sensations we feel, such as: cold, hot, smooth, rough, pressure, tickle, itch, pain, vibrations.

The protective system (primitive response) responds to light or unexpected touch and helps to alert us to potential danger.

The discriminative pathway (touch perception) helps us to interpret what we are touching and where on the body we are experiencing contact.

The tactile system is also responsible for temperature control.

The tactile system responds to deep pressure touch, touch combined with motion, and the precise localisation of touch (point of contact). It enables us to feel the quality, shape, size or location of the source of touch.

The brain receives information about the type of touch we are experiencing e.g. pressure of touch, texture, pain, location and temperature and this assists us to make an appropriate response.

This touch perception plays an important role in adaptive motor behaviours, particularly in the initiation and planning of movement (Ayres) and the exploration of the environment.

What you may see	Activities/ideas to try
Avoids touching or exploring toys with their hands and may dislike messy play.	Do not force the child to join in. Slowly introduce different textures into play activities such as: sand, moon sand, lentils, water, talc, finger paints, foam and soap. Give new touch experiences in small amounts to start with e.g. place their hand over yours rather than directly onto the object or into the messy material until they gain confidence. When trying touching activities, use a calm, quiet and encouraging voice; work in a calm, quiet place. Combine touch activities with changes in body position. Be slow and gentle when introducing challenging activities - keep activities short and follow them with a favourite activity of their choice. Do not move onto the next texture too quickly. Celebrate small achievements. Let the child work at their own pace.

What you may see	Activities/ideas to try
	<p>Start with dry textures, move on to wet and then sticky. Stop immediately if the child starts to gag. Respect the child's limits and do not go too fast. Work with the child to build their confidence with challenging activities. Allow them to clean their hands if they ask and encourage them to restart the activity. Set up a range of sensory bins for different types of touch play.</p>
Withdraws from cuddles.	<p>Try different levels of touch, such as using a firm hug rather than light touch or vice versa. Try using 'high fives' rather than hugs. Use objects instead of 'skin to skin' contact, for example, during play, roll a ball over their hand/body.</p>
Easily/very ticklish.	<p>Tickling can lead to discomfort for some but enjoyment for others. Tickling should be avoided for a child who is over-responsive. Be aware, tickling may cause a child to go into a 'fight or flight mode' and to hit out and become disorganised. Avoid 'light touch' activities, such as patting on the head or tickling, particularly if unexpected. Use a firm/deep pressure touch rather than a light touch, such as massage rather than tickling. Use deep pressure squeezing/compression along the hands and arms.</p>
Finds nappy/'pull up' changing distressing.	<p>Check the changing mat or area is not too cold. Change the child in a quiet and low stimulating place. Determine if the child likes a firm or light touch. Do not handle them too much - use single/quick movements. Include a motivating activity/toy or use a distraction e.g. singing a familiar song.</p>
Becomes disorganised, over emotional and/or out of control when brushed past or touched lightly.	<p>Allow space around the child. Avoid touching them from behind. Arrange seating in the classroom to avoid the risk of being bumped by fellow class mates. Do not place child where others are constantly walking behind them. Ensure individuals supporting the child understand they find touch difficult to manage. Consider where the child finds it best to stand if they need to queue/line up e.g. at the start or end of the line. Allow them to leave sessions early to avoid unnecessary contact. Encourage the use of hand held/squeezy fidget toys.</p>

What you may see	Activities/ideas to try
Fearful of going out in the rain or wind.	<p>Try using distraction and coping strategies, such as singing or talking through the process “Hat on, coat on, car heater on.”</p> <p>Give the child ears muffs, a hat and an umbrella.</p> <p>Use a music player and headphones with their favourite music.</p>
Dislikes seams in socks, labels in clothes or the feel of clothing.	<p>If the child is over-responsive, try using seamless socks/clothing and remove labels from clothing.</p> <p>Wash new clothing before they wear them to help soften the fabric.</p> <p>Stick to familiar, acceptable clothing they like and slowly introduce new garments for short periods.</p> <p>Try tight fitting under garments, such as a Lycra T shirt/shorts or specialist compression clothing.</p>
Dislikes hair washing/cutting/brushing, nail cutting.	<p>Use proprioceptive, calming techniques to help calm the over alert sensory system before carrying out any activity.</p> <p>Give firm compression to the child’s head before starting the activity.</p> <p>Give firm compression to each nail bed before and after cutting or clipping their nails.</p> <p>Cut or clip their nails after a shower or bath, or try while they are sleeping.</p> <p>Use baby scissors/clippers.</p> <p>Use distraction toys/activities while doing the task.</p> <p>Use stories to prepare the child for a haircut at the hairdressers or barbers.</p> <p>Visit the shop before the actual haircut and allow the child to handle the tools with supervision.</p> <p>Try getting their hair cut at home as they may be more relaxed at home.</p> <p>Have the child watch videos of children getting a haircut.</p> <p>Use a cape or cover to stop the cut hair causing distress and brush hair off immediately after the cut or change their top.</p> <p>Use a hair dryer to blow away cut hair.</p> <p>Use music player and headphones during the cut to reduce noise of scissors/clippers.</p> <p>Give the child a healthy chewy snack during the task or a chew object/chewlery.</p>
Constantly touches things within their environment.	<p>Use proprioceptive activities to help the child to understand where their body is in space.</p> <p>Provide them with a fidget tool to hold/squeeze.</p>

Internal Senses

There are **three** “internal senses”. Internal senses come from our internal organs:

- Body Position Sense (Proprioceptive System)
- Balance and Movement (Vestibular Processing)
- Interoception (the sense of internal organ).

Body Position Sense (Proprioceptive System)




Proprioception (body position) tells us about the position of our body parts and their relationship to each other and their relationship to other people and objects. Proprioception also lets us know how much force is needed when we use our muscles and grade our movements. It develops through weight bearing activities and movement against gravity.

Proprioception is critical in the maturation of reflexes (particularly the righting and equilibrium reactions), in perception of body position and movement in space and against gravity, and in providing postural security and stability as a child moves.

Receptors for the proprioceptive system are located in muscles, tendons, ligaments, joint capsules and in the connective tissue. The receptors of the proprioceptive system respond to movement and gravity but also send information to the brain even when the body is still. It is difficult to separate the vestibular and proprioceptive systems because many of their functions overlap.

What you may see	Activities/idea to try
Floppy and appears to have weak muscles.	Work on development of core stability to give a good base of stability for any activities. Provide opportunities to jump on a mini trampoline.
On the go and struggles to sit/stand still.	Provide regular movement breaks, which include ‘heavy work’ activities to help keep them calm the nervous system e.g. Helping to rearrange furniture (supervised) or Handing out books in class. Allocate jobs to provide movement breaks, e.g. library book collector / monitor, taking messages to / from the office. Try tying Theraband around the legs of the child’s chair for them to push their legs against for resistance. Use weighted lap pads to increase the child’s body position awareness when seated. Let the child try using a weighted vest/shoulder snake/‘squeeze vest’. Provide the child with a ‘heavy backpack’- this must be no more than 10% of their body weight.
Leans on people when sitting or standing.	Work on core stability and talk about ‘personal space’ of self and others. Use a social story to explain personal space.

What you may see	Activities/idea to try
Heavy footed/handed.	Work on increasing body awareness - vary the force/ effort required to carry out movement activities. Massage – using firm pressure touch on arms, legs, palms of hands and feet.
Heavy handed e.g. throws ball too hard, presses down hard when writing, gives really firm hugs.	Work on 'warm up' Theraputty/Theraband activities to increase hand/arm awareness and to prepare the hand ready for functional tasks. Use a pressure/light pen to show the child when they are pressing too hard on the paper. Vary the child's writing surface e.g. writing over a Dycem mat - if the child presses down too hard they will go through the paper and therefore learns how much pressure to apply. Work on understanding the different levels and tightness of hugs.
Seeks extra movement, such as crashes, bumps into things or people.	Provide chances to access rough and tumble play activities, such as indoor soft play area or outdoor gym and exercise equipment. 
Has a high pain threshold.	Ensure they are safe when carrying out activities – you may need to watch them more closely than children of the same age. Highlight potential risks to children/teacher/carers who are working with them.
Chews on non-food objects.	Provide the child with chew tools / chewlery options. Distract and provide alternative calming activities.
Tends to play more roughly than peers and breaks items without meaning too.	Introduce the following types of activities as an alternative:- <ul style="list-style-type: none"> • Chair push-ups - place palms on each side of the seat, push down and lift bottom off the chair. Hold position for a count of five and then lower. Repeat five to ten times. • Wall push-ups - stand arm's length away from the wall, with hands at shoulder height, keep back and legs straight and bend arms to do push ups. • Floor push-ups/planking exercise. • Talk about different grip strengths needed to carry out tasks.
May find some activities more difficult to pick up than their peers e.g. riding a bike, swimming, team games.	Use visuals to support sequencing activities / movements. Be prepared to repeat instructions lots of times; this will help increase the child's skill development. In team games, pair the child with a 'buddy' who can support them to complete the set task. Use a 'Goal, Plan, Do, Check' approach to learning new tasks. Play games that involve alternating movements with upper and lower limbs, as a step towards achieving bike riding / swimming.

Balance and movement (Vestibular Processing)



The vestibular system provides us with information regarding head position and movement against gravity.

Balance and movement (vestibular processing) receptors are found in our inner ear. They send information about our head position and how we are moving.

If our brain does not process the movement sensation correctly, then we may be described as over-responsive or under-responsive to movement sensation and this can affect our behaviour. The vestibular system gives us physical and emotional security when moving in space.

Information from the vestibular system links with the area of the brain that is responsible for attention and arousal levels.

If the brain is over-responsive, it can cause a child to feel fear, anxiety and avoidance i.e. the child may become upset or anxious when their head is tilted forwards or backwards. If under-responsive, a child will find it difficult to sit still, be always 'on the go', fidget in their seat or rock on the floor or in their chair.

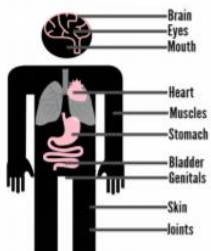
The vestibular system has a critical role in the modulation of all the other sensory systems.

The ability to balance incoming sensations assists with self-regulation and allows us to maintain appropriate levels of arousal.

What you may see	Activities/ideas to try
Fearful of playground equipment - dislikes swings and slides.	Combine movement activities with opportunities to engage in heavy work, as this helps develop body awareness. Encourage the child to join in games and activities using movement they find fun and can tolerate. Never force the child to join in. Hold their hand for reassurance if necessary.
Gets travel sick in car/buggy easily.	Position the child so they can look forwards. Make sure the child's seat belt is correctly fitted and not loose across their body. Try using travel sickness bands. Place a hard surface under the child's feet when they are sitting down in the car. Use foot plates in a buggy to provide the feeling of stability. Avoid big, sudden and unexpected movements.
Anxious if not in control of movement.	Do not force movement if the child is anxious or becomes upset. Provide deep pressure inputs to help calm and organise the child's nervous system.
Dislike of head-tilt or head movements, particularly backwards in space.	Try not to wash the child's hair by tilting their head backwards, as this can cause a 'fight / flight' response.

What you may see	Activities/ideas to try
Trouble walking on uneven surfaces (with no fear of movement).	Practice walking on different surfaces whilst keeping balance – set up obstacle courses.
Bumps into others / furniture.	Encourage lots of heavy work activities, deep pressure massage and body squeezes. Provide opportunities to practice movement skills such as: rolling, crawling, jumping, swinging, animal walks.
Seeks movement/rocking/fidgeting motion.	Give frequent movement breaks - split the child's day into small sections. Give lots of chances for movement and changes in body position, particularly prior focused tasks. Ask the child to run an errand or do some brain break activities. Ensure the child's feet are supported in sitting. Allow them to work and play in different positions - try activities while lying on their tummy, in high or half kneeling positions and standing at a table, as these positions will help to improve body awareness and provide more proprioception. Use proprioceptive/heavy work activities to help calm and organise the child i.e. pushing and pulling tasks (moving furniture, pushing a shopping trolley, opening a heavy door, gardening tasks, sweeping the floor, wiping the table/windows, carrying and moving the wash basket, digging in sand/gravel/soil, carrying buckets of sand/ gravel/water, cooking with supervision, stirring cake mixture, rolling out pastry). Set up an obstacle course that involves climbing over, under, through and around different objects. You could use cushions, cardboard boxes, duvets, chairs, and skittles. Encourage the child to describe what they are doing using spatial words e.g. under, through and over etc. Give them a backpack to wear – this must not be more than 10% of the child's bodyweight.
Spins/twirls.	Play games where rotation/turning is part of the activity e.g. ring a ring a roses, pin the tail on the donkey, rolling on the floor. Limit spinning (five rotations each way) and encourage forward and backwards (linear) movements instead. Play Tug-of-war or Row, Row the Boat. Play an 'Animal Walks' game – child moves like an animal e.g. on their tummy like a seal, wriggling along like a worm, walking like a crab, walking like a bear on hands and feet with their bottom raised.
Child appears to take excessive risks and shows no fear.	Encourage safer games that involve jumping or bouncing and movement against gravity, such as trampolining, star jumps, using a space hopper. Move the child towards more suitable large play equipment or floor-based movement tasks when they want to climb.

Interoception

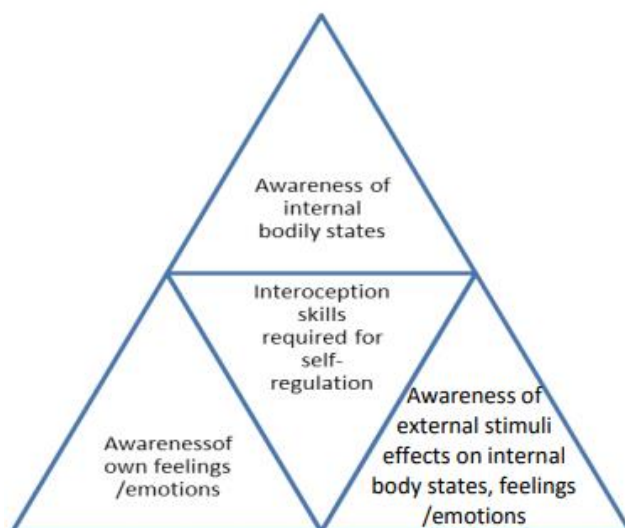


Interoception is the sense of internal organ function. It is responsible for body responses, such as breathing, hunger, heart rate and digestive elimination (bowels).

Children with well-developed Interoception are able to use both reason and emotions to help deal with new situations.

When children have not yet developed Interoception skills, they struggle with their own emotions and also with social situations and being around other people may be difficult for them to manage. They tend to rely on reasoning and need to carefully think through their possible responses to each situation.

Having to think through each situation can be extremely tiring for a child; this can add to overload, shutdown, meltdowns, anxiety and depression. Another way of understanding Interoception is to describe it as 'mindful body awareness'.



Ref: Goodall, E. - Department for Education and Child Development South Australia (2016)

Defensiveness

Hyper-reactivity/over-responsiveness in internal organ functions may appear as a pounding heartbeat or intense hunger pangs (pains). These sensations may become irritating and distracting to a child. In the case of hunger, it may cause the child to eat more often to avoid the 'painful sensations'. They may also go to the toilet more often to avoid painful bowel and bladder sensations or they may even try to avoid going at all.

Under-responsiveness

In the case of hypo-reactivity/under-responsiveness, a child may not feel or respond to sensations correctly, quickly enough or even at all.

Seeking

A child may be constantly 'on the go' so they can achieve a pounding heart beat and fast breathing rate. They may also enjoy the feelings of hunger or thirst and may avoid eating or drinking to create it. There is also the possibility of them avoiding going to the toilet as the sensation of needing to remove body waste may be craved.

Discrimination disorder

A child may find it difficult to decide what their body needs are at any given time. They may not be able to tell how hungry or thirsty they are or may not realise they need to go to the toilet until the last minute.

They may also have difficulty knowing when they are feeling better, worse, warmer, colder, tired or active, as they cannot make sense of what their body is telling them.

What you may see	Activities/ideas to try
Still developing bladder/bowel control.	Toilet image or icon on their visual timetable at regular intervals (placing to be agreed with family/school and child).
Still developing awareness of thirst.	Keep water bottle on desk / easily accessible in classroom. Use photo of student drinking from their water bottle - to be either timetabled regularly or presented to student when they lose focus on tasks.
Still developing awareness of hunger.	Prompt with a fruit snack visual, snack visual, 'listen to a story and eat' visual. Prompt child to take a snack - "What would you like to eat from your lunch box?" (asked whilst offering lunch box) - "You seem hungry, have a snack".
Does not yet recognise when getting angry, anxious or upset.	Choice board with two or three known calming activities to be presented when signs of anger/anxiety are appearing. Use a 5-point scale (but not to be used during a meltdown). Prompt the child - "You seem to be getting angry/anxious, have a drink of water then come and let me know what the problem is" or "Could you please get/do.....", (where is a known calming activity).
Uses very loud voice.	Use a 'Noise-o-meter'. Use Whisper visual/Silence visual/Talking visual/Loud voice visual – show to child as necessary (or use as a whole class symbol).

Interventions - How to Help the Child

Sensory processing differences lead to issues with levels of attention and make it difficult for a child to regulate/cope during their day.

To attend, concentrate, and perform tasks in a manner suitable to the situational demands our nervous system must be in an optimal state of alertness for that particular task. Children who have sensory processing differences will struggle to focus and do everyday tasks.

There are a variety of methods/approaches that can be used to work on to help with the regulation of sensory processing.

Sensory Diet

A 'Sensory Diet' is a structured way to include specific activities that organise the child's nervous system in their daily routine.

It is a personalised activity plan that suggests the sensory input a child/young person needs to stay focused and organised throughout their day.

A sensory diet includes activities that help the child to feel calm, alert and in an optimal state of arousal.

Engaging a child in sensory activities on a frequent, regular basis can help to keep them engaged, focussed and in more control. When the child gets disorganised these activities can help them to 'find themselves again'.

It can help modulate behaviour, mood and level of arousal, thus enabling the child to engage and participate in the activities they want and need to do.

An effective sensory diet can only be achieved by using a collaborative/team approach; involving all those responsible for the care of the child, at home and in care/educational settings.

The sensory diet should help the child:

- Tolerate different sensations and situations that are challenging for them.
- Regulate emotions, alertness and increase attention/concentration.
- Reduce unwanted sensory seeking and/or sensory avoiding behaviours.
- Handle transitions with less anxiety and stress.

A sensory diet is not something to do just for a day, a week or a month; it should become part of the child's everyday life.

How to Make and Implement a Sensory Diet

There are several things to consider when planning and putting a sensory diet into place:

- Look at the child's sensory processing differences and what impact this has on function.
- Use a mixture of sensory activities in the child's sensory diet and consider what they like to play and what are interested in.
- Do not use sensory activities as a reward or bribe.
- Be proactive, not reactive. Reflect on the behaviours that may be associated with particular events or environments throughout the day (look for their possible triggers), and whether sensory activities would be appropriate prior, during and after.
- It is suggested sensory activities should be done every 90 minutes or when sensory behaviours start to happen. Make a note of any possible triggers if there is a change in their behaviour.
- Consider the effects of the environment/ setting, lighting levels, noise, temperature and possible distractions, such as the television, radio and other people. If necessary, try to sort these out before, during and after activities.
- Initially the child may need to be directed to a relevant sensory activity and the amount of time accessing it may be need to be controlled.
- Eventually, the child should be able to initiate and direct themselves to the type of sensory input they need. Respect the child's choices as long as they do not place themselves or others in any danger.
- Think about where you store the equipment you need for the child's sensory activities, especially if they have difficulties that stop them from using or requesting the activities themselves.
- You will need to look at using different sensory activities when at home, in the community and in school, as the sensory challenges may not be the same in different environments.
- Take time to monitor the effects certain activities have on the child. This will help you to build up a list of things that help and those that do not.

See Appendix 1 – Sensory Diet Sample and Blank Sensory Diet.

Along with all the information previously discussed, it is also important to bear in mind the environment. Try and build a quiet, calm environment for the child so their sensory systems are not being bombarded by noise or activity. Consider lighting, noise, smell, textures and space.

The following are additional programmes to help a child with sensory processing differences.

Alert Programme

The ‘Alert Programme’ uses charts and activities to help the child to identify and manage their levels of alertness.

Adults guide the child to recognise how the different senses affect them and how they can use different strategies to change their levels of alertness.

The goal of the programme is not only to teach children how to get their “engines to run just right” and remain there throughout the day but also how to change their level of alertness to meet situational demands (Shellenberger and Williams 2002).

It teaches children how to get their “engines to run just right” during the day.

Engine Levels – what you see:

When the engine is too low	When the engine is just right	When the engine is too high
Talks slowly and quietly.	Uses “just right voice” to talk.	Speaks with a loud voice.
Is too tired to listen to the teacher.	Not too loud and not too soft.	Has a hard time listening to you, their mind is racing.
Is too tired to do work.	Listens to teacher and follows directions because their ‘body’ is “just right.”	Has a hard time doing work or their body is moving too fast.
Moves slowly.	Gets work done because their body is “just right.”	Is always moving or on the go.
Is too tired to play with friends.	Plays the same game with friends and talks about the same things friends are talking about.	Their body and mind are moving fast when playing with friends - others or self may get hurt.
Seems withdrawn, quiet or is not interested.		

Alertness/Self-Regulation

The following table provides information on managing alertness levels. For children who fluctuate between high and low levels of alertness / arousal, refer to the multi-effect modulation technique section in the table.

Calming Techniques (for children in a high engine level)	Multi Effect Modulation Techniques for children fluctuating between high and low engine levels	Alerting Techniques (for children in a low engine level)
<p>Use low-level lighting or dim the lights.</p> <p>Encourage the child to listen to quiet music or stories with headphones.</p> <p>Use a soft voice and slow down your movements and your speech.</p> <p>Provide a quiet hidden corner to work or play in.</p> <p>Provide a rocking chair or beanbag to sit in.</p> <p>Suggest that the child use a lap pad.</p> <p>Avoid rushing or hurrying the child as much as possible – plan ahead.</p> <p>Have chewy food / chew toys / chewlery available.</p>	<p>Give the child a bear hug to provide deep pressure touch.</p> <p>Provide proprioceptive inputs by placing your hands on the child’s shoulders when they are seated, pushing firmly down.</p> <p>Teach them to self-modulate by placing both hands on the top of their head and then to push down while counting slowly.</p> <p>Have the child push hard on the wall or doorframe.</p> <p>Do push-ups on a chair, desk or table-top.</p> <p>Provide the child with pushing, pulling, carrying and lifting activities, with less body movements.</p>	<p>Give the child cold or iced water in a water bottle.</p> <p>Use bright lighting.</p> <p>Have the child pat cool water on his/her face.</p> <p>Take frequent breaks during more difficult tasks (march, hop, skip, jump, run in place or do sit-ups/push ups).</p> <p>Play loud, fast-paced music before doing an activity of homework.</p> <p>Encourage an active break time or outside play time with swinging, running, sliding and climbing.</p> <p>Have a mini trampoline available in the classroom, quiet/calm zone or P.E. hall.</p>

‘Zones of Regulation’

Another similar programme is the ‘**Zones of Regulation**’. This is a systematic, cognitive behavioural approach used to teach self-regulation by categorising all the different ways we feel and states of alertness we experience into four concrete coloured zones.

The ‘Zones’ framework provides strategies to teach children to become more aware of and independent in controlling their emotions and impulses, manage their sensory needs and to improve their ability to problem solve conflicts.

By addressing underlying deficits in emotional and sensory regulation, executive functioning and social cognition, the framework helps to move students toward independent regulation.

There are Four Zones – Our Feelings and States Determine our Zone:

The **Red Zone** describes extremely heightened states of alertness and intense emotions. A person may be elated or experiencing anger, rage, explosive behaviour, devastation or terror when in the 'Red Zone'.

The **Yellow Zone** describes a heightened state of alertness and elevated emotions; however, the person has more control when they are in the 'Yellow Zone'. A person may be experiencing stress, frustration, anxiety, excitement, silliness, the wiggles or nervousness when in the Yellow Zone.

The **Green Zone** describes a calm state of alertness. A person may be described as happy, focused, content or ready to learn when in the 'Green Zone'. This is the zone where optimal learning occurs.

The **Blue Zone** describes low states of alertness and down feelings such as when a person feels sad, tired, sick or bored.

Along with all the information previously discussed it is also important to bear in mind the environment - try and build a quiet, calm environment, so the sensory systems are not being bombarded by noise or activity. Consider lighting, noise, smell, textures and space.







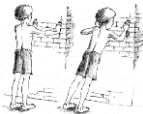
































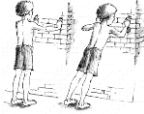
















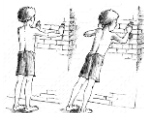
These are just a few examples of interventions that can be used with a child who is presenting with sensory processing differences.

There are also a number of books that are helpful in raising awareness of sensory processing differences and interventions. These can be found in **Appendix 2 – Useful reading**.

If you have any queries, please do not hesitate to discuss these with the occupational therapy team.

Appendix 1 - Sensory Diet Chart



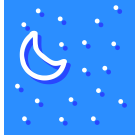
The following chart is an example of a sensory diet:

	 Before School	 After School	 Before Bed 
Monday	   	  	  
Tuesday	   	   	  
Wednesday	   	   	   
Thursday	   	   	  
Friday	   	  	  

REMEMBER: this is only an example of a sensory diet. Not all activities have to be completed each day and the activities can be changed. Try to tailor the activities to ones that the child will enjoy and want to do.

Sample Sensory Diet - Home

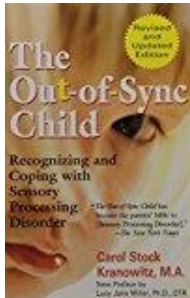


	Morning 	After school or during the evening 	Before bed 
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Appendix 2 - Useful Reading

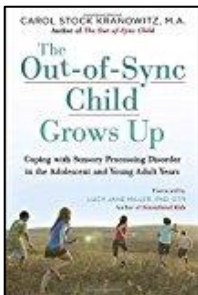
There are also a number of books that are helpful in improving awareness of sensory processing differences and interventions. These can be found below.

The Out-of-Sync Child by Carol Stock Kranowitz



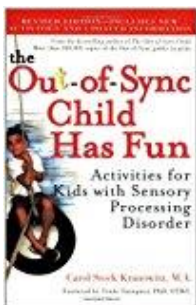
- **Publisher:** Penguin
- **ISBN-10:** 0399531653
- **ISBN-13:** 978-0399531651

The Out-of-Sync Child Grows Up: Coping with Sensory Processing Disorder in the Adolescent and Young Adult Years by Carol Kranowitz and Lucy Jane Miller



- **Publisher:** Penguin
- **ISBN-10:** 0399176314
- **ISBN-13:** 978-0399176319

The Out-of-Sync Child has Fun, Revised Edition: Activities for Kids with Sensory Processing Disorder by Carol Kranowitz.



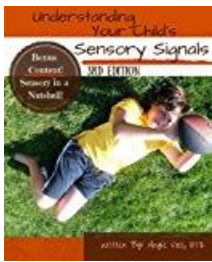
- **Publisher:** Penguin
- **ISBN-10:** 9780399532719
- **ISBN-13:** 978-0399532719

Raising a Sensory Smart Child: the Definitive Handbook for Helping Your Child with Sensory Processing Issues, Revised Edition by Lindsey Biel, Nancy Peske & Temple Grandin.



- **Publisher:** Penguin
- **ISBN-10:** 0143115340
- **ISBN-13:** 978-0143115342

Understanding Your Child's Sensory Signals: A Practical Daily Use Handbook for Parents and Teachers by Angie Voss



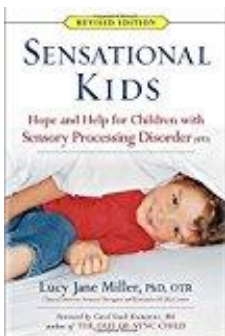
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Publisher: CreateSpace Independent Publishing

ISBN-10: 1466263539

ISBN-13: 978-1466263536

Sensational Kids: Hope and Help for Children with Sensory Processing Disorder (SPD) by Lucy Jane Miller



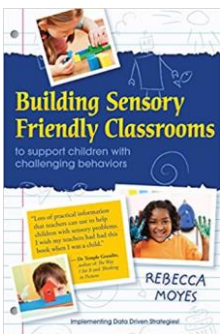
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Publisher: Penguin

ISBN-10: 039916782X

ISBN-13: 978-0399167829

Building Sensory Friendly Classrooms to Support Problem Behaviors: Implementing Data-driven Strategies! by Rebecca Moyes



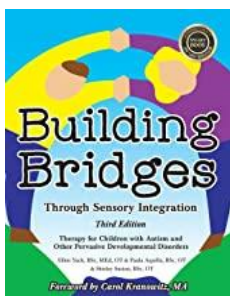
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Publisher: Future Horizons

ISBN-10: 1935567233

ISBN-13: 978-1935567233

Building Bridges Through Sensory Integration: Therapy for Children with Autism and Other Pervasive Developmental Disorders by Paula Aquilla, Ellen Yack, et al.



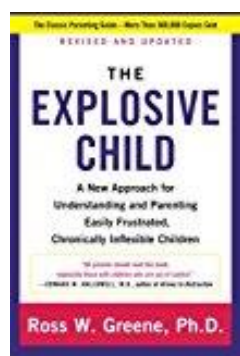
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Publisher: Future Horizons

ISBN-10: 1935567454

ISBN-13: 978-1935567455

The Explosive Child: A New Approach for Understanding and Parenting Easily Frustrated, Chronically Inflexible Children by Ross W. Greene (this is a behaviour book with very good reviews)



- **Publisher:** Harper
- **ISBN-10:** 0062270451
- **ISBN-13:** 978-0062270450

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Kranowitz, C: *The Out of Sync Child: Recognizing and Coping with Sensory Integrative dysfunction*. Perigree (1998)
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Fisher A.G. et al: *Sensory Integration Theory and Practice* (1991)
Ayres, J: *Sensory Integration and the Child*. Western Psychological Service (1979)
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Additional sources of information

- Sensory Processing Dysfunction Occupational Therapy Pre-referral advice for schools – Pennine Care NHS Trust
- NHS Greater Glasgow and Clyde - <https://www.nhsggc.org.uk/>
- A Practical Approach at Home for Parents and Carers Making Sense of Sensory Behaviour – Falkirk Council Children’s Service.
- Kent Community Health NHS Foundation Trust - <https://www.kentcht.nhs.uk/childrens-therapies-the-pod/occupational-therapy/sensory-processing/>
- Royal Free London NHS Foundation Trust Occupational Therapy Services for Children - Sensory Processing Skills pdf.
- Hertfordshire Community NHS Trust – Understanding Sensory Difficulties pdf
- An Introduction to Identification & Intervention for Children with Sensory Processing Difficulties – Presentation by Jackie Brown, OTR/L

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It is the responsibility of those implementing any intervention strategies to ensure they have consent to implement the interventions and are suitably trained to do so. They are also responsible for carrying out any necessary risk assessments prior to implementing interventions to ensure the health and safety of the individuals involved in the intervention.