GRANGE SCHOOL

sensay
SUPPORT FOR LEARNING

Sensory Processing

Enabling Environments

Three Areas Autism is typically defined by are:



Social understanding and communication



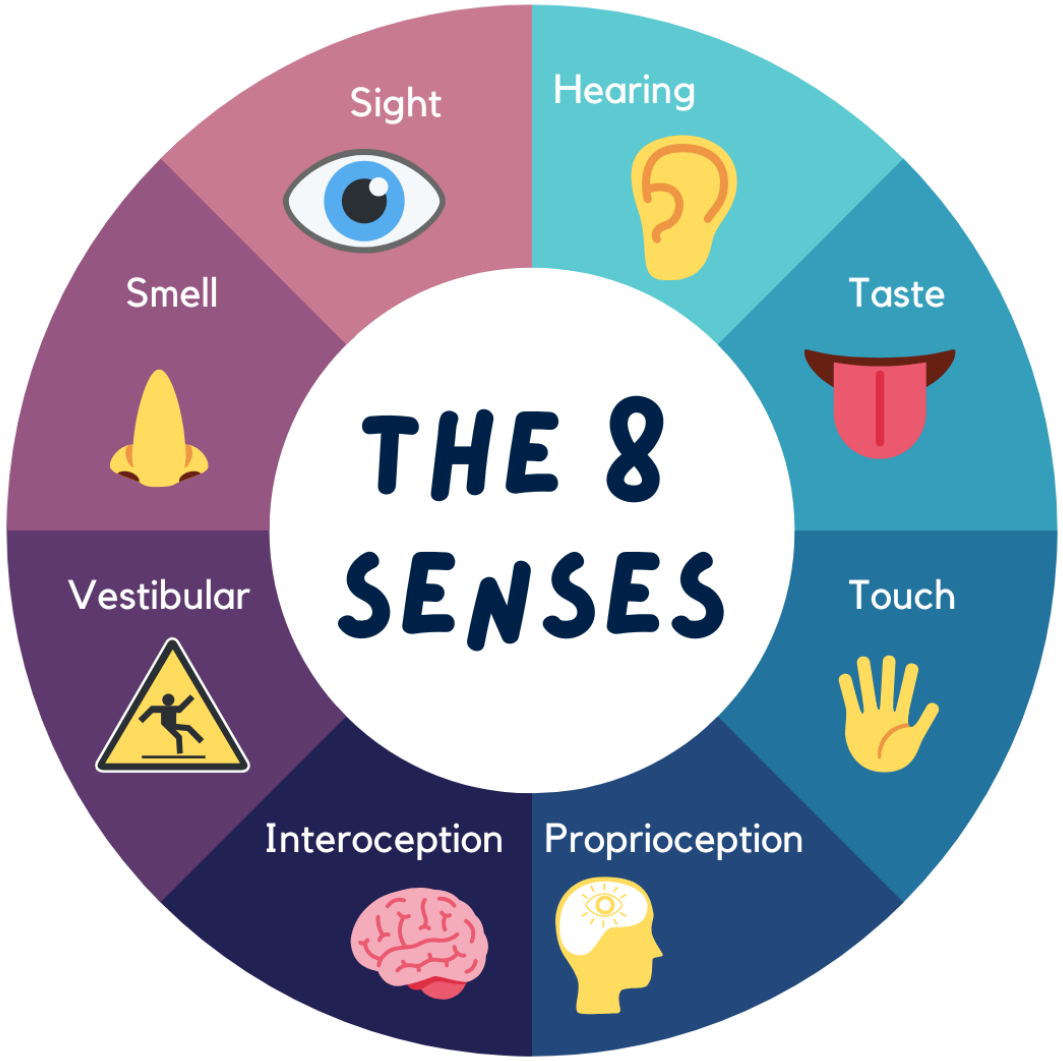
Flexibility, information processing and understanding



Sensory processing and integration

Sensory differences

- Most autistic people have significant sensory differences, compared to most non-autistic people.
- Autistic brains take in vast amounts of information from the world, and many have considerable strengths, including the ability to detect changes that others miss, great dedication and honesty, and a deep sense of social justice.
- But, because so many have been placed in a world where they are overwhelmed by pattern, colour, sound, smell, texture and taste, those strengths have not had a chance to be shown.
- Instead, they may be plunged into sensory crisis, which can lead to either a display of extreme behaviour – a meltdown, or to an extreme state of physical and communication withdrawal – a shutdown.



The 5 Senses

- Hearing
- Sight
- Taste
- Smell
- Touch

The 3 Internal Senses

- Vestibular (balance)
- Proprioception (awareness of body position and movement)
- Interoception (awareness of internal body cues and sensations)

Hypersensitivity (higher sensitivity) and Hyposensitivity (lower sensitivity)

- Autistic people can experience both hypersensitivity (higher sensitivity) and hyposensitivity (lower sensitivity) to the environment. Most people have a combination of both.

Hypersensitivity

- Certain sounds, smells, textures and tastes can also be overwhelming. This can result in sensory avoidance – trying to get away from stimuli that most people can easily tune out.
- Sensory avoidance can look like pulling away from physical touch, covering the ears to avoid loud or unpredictable sounds, or avoiding certain kinds of clothing.

Hyposensitivity

- This can look like a constant need for movement; difficulty recognizing sensations like hunger, illness or pain; or attraction to loud noises, bright lights and vibrant colours. People who are hyposensitive may engage in sensory seeking to get more sensory input from the environment.
- For example, people with autism may stimulate their senses by making loud noises, touching people or objects, or rocking back and forth.

Hearing/Auditory

Sound

- Is responsible for our sense of hearing.
- The organ of hearing is the cochlea in the inner ear.
- Hearing is switched on 24/7
- We can filter out unimportant information.
- Hearing has a protective function and alerts us to danger.



Sound Challenges

Higher sensitivity may mean that some people:

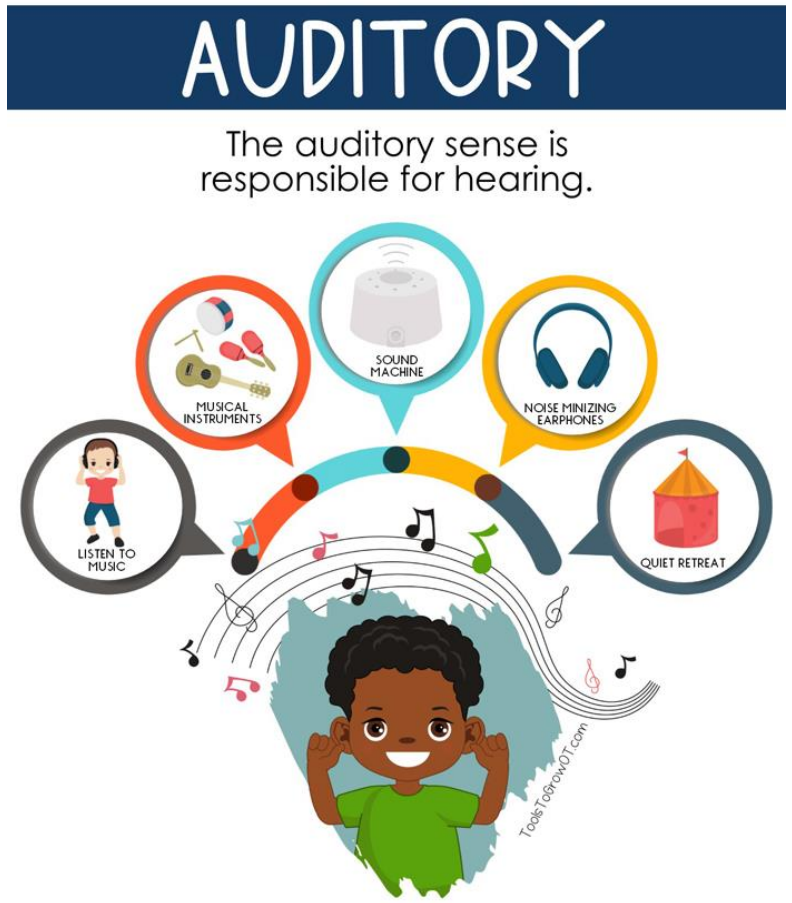
- Can have difficulty with two or more people talking at once.
- Be startled and frightened by unexpected sounds and bright lights.
- Hear background noises other people aren't able to detect.
- Have difficulty screening out background noise.

Lower sensitivity may mean that some people:

- Appear not to hear what you say even when you call their name.
- Makes noises to keep focused on task.
- Seek auditory input such as turning up the volume or banging doors and objects.

Enabling the Environment (Hearing)

How schools can make reasonable adjustments



Higher sensitivity

- Use headphones/ ear defenders.
- Ensure quieter spaces are available.
- Decrease background noises.

Lower sensitivity

- Back up speech with visual clues.
- Use a visual support to help understanding e.g. typed notes on a handout, pictures, keeping instructions on board.
- Break complicated directions into fewer parts and give time to complete the each step before.
- Prior to a discussion, write down two or three main points for student to listen for; then check for memory and understanding of those points.

Sight/ Visual

Sight

- The eye and the brain communicate and work together to help us interpret our physical surroundings.
- Provides information about people and objects in front of and to the side of us.
- Helps us to define distance, depth and colour as we move through and negotiate space.
- Vision is closely integrated with all of our other senses.



Sight Challenges

Higher sensitivity may mean that some people:

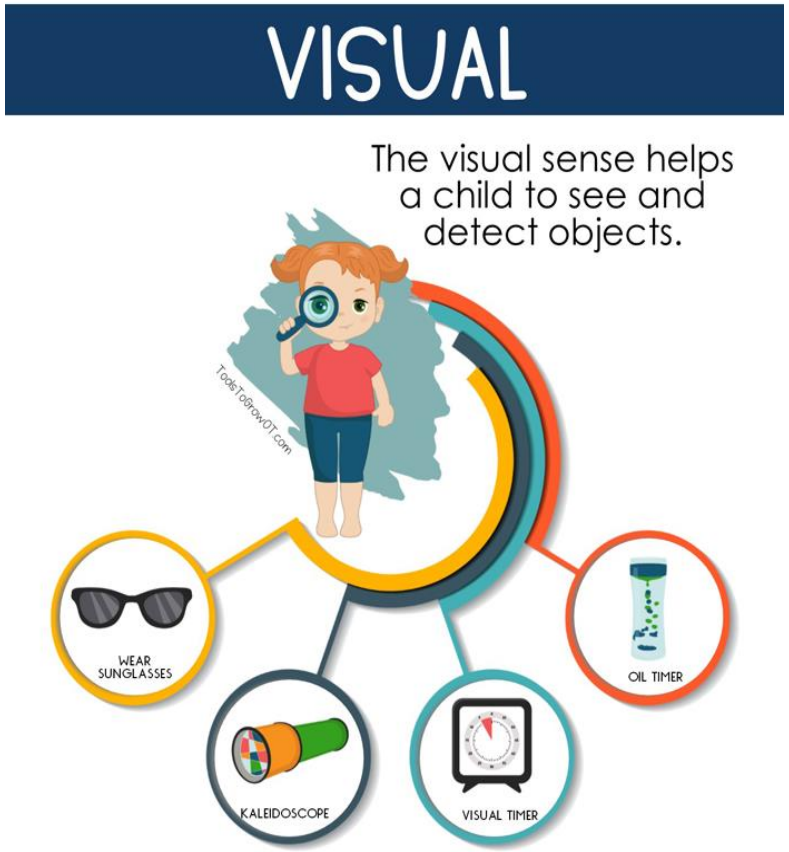
- May not tolerate colours, patterns or light.
- Avoid eye contact
- Notice detail in their surroundings but not an overall picture “looking at the trees, but not at the forest”.

Lower sensitivity may mean that some people:

- Find it difficult to see certain colours or transparent objects.
- Seek out stimuli such as staring into light sources or at bright colours.

Enabling the Environment (Sight)

How schools can make reasonable adjustments



Higher sensitivity

- Avoid florescent and flickering lights.
- Walls should not be too busy – neutral paint colour.
- Wearing a hooded sweatshirt or sunglasses may help.

Lower sensitivity

- Use activities and resources in bright colours.
- Some people may require visually defined spaces.
- Use LED and colour-changing lights.
- Use visually stimulating toys such as Kaleidoscope, View Finder, Spin Tops and Fidget Spinners.

Taste/ Gustatory

Taste

- Receptors are located on tongue.
- They recognise taste sensations, sweet, sour, salty and bitter.
- Taste can be protective e.g. poisonous food often bitter.



Taste Challenges

Higher sensitivity may mean that some people:

- Find some flavours too strong and overpowering.
- Find some textures cause discomfort and may prefer to eat smooth foods like mashed potatoes or ice-cream.
- Prefer to eat tried and tested food.

Lower sensitivity may mean that some people:

- Enjoy very spicy foods.
- Eat or mouth non-edible items sometimes including stones, dirt, soil, grass, metal, faeces. *(this is known as pica).*

Enabling the Environment (Taste)

How schools can make reasonable adjustments



Higher sensitivity

- Offer foods without strong flavour and/or colour.
- Keep foods separate on the plate.
- Ensure eating can take place in a calm environment to reduce anxiety.
- Use a desensitisation process to introduce new food.

Lower sensitivity

- Offer a strongly flavoured sweet or a mouth spray when attention seems to be deteriorating e.g. strong mint, sour sweet.
- Offer ice cold water
- Have sensory chewable items available e.g commercially available necklaces, pendants, bangles.

Smell / Olfactory

Smell

- Receptors are located in nasal structure.
- There is a direct connection to the limbic system.
- smell has a protective function as a general alarm system alerting us to fire, decayed food.



Smell Challenges

Higher sensitivity may mean that some people:

- Feel overwhelmed by smells particularly competing smells *(for example food in a dinner hall, perfumes and shampoos.)*
- Are bothered by toilet smells

Lower sensitivity may mean that some people:

- Have little sense of smell and fail to notice extreme odours *(this can include their own body odour).*
- May need to lick or taste things to get a better sense of what they are.

Enabling the Environment (Smell)

How schools can make reasonable adjustments



Higher sensitivity

- Make the environment as fragrance free as possible e.g use fragrance free cleaning products.
- Ensure there is a seat away from objects that may produce strong odours e.g the rubbish bin.
- Keep rooms well ventilated.
- Teach appropriate coping strategies:
    - Cover nose with tissue
    - Inform teacher that smell is unpleasant, either verbally or using a visual cue

Lower sensitivity

- Provide activities which stimulate the olfactory senses:
    - Playing in grass, using scented play dough, or cooking with strong smells.
    - Provide appropriate scented items, and direct to these when appropriate.

Tactile



Touch

Touch

- Is responsible for processing touch information from the body.
- It's how we feel all touch sensations, including vibrations, temperature, textures and pain.
- We have receptors in our skin all over our bodies that send signals to our brains.
- Touch is very important for overall organisation.



Touch Challenges

Higher sensitivity may mean that some people:

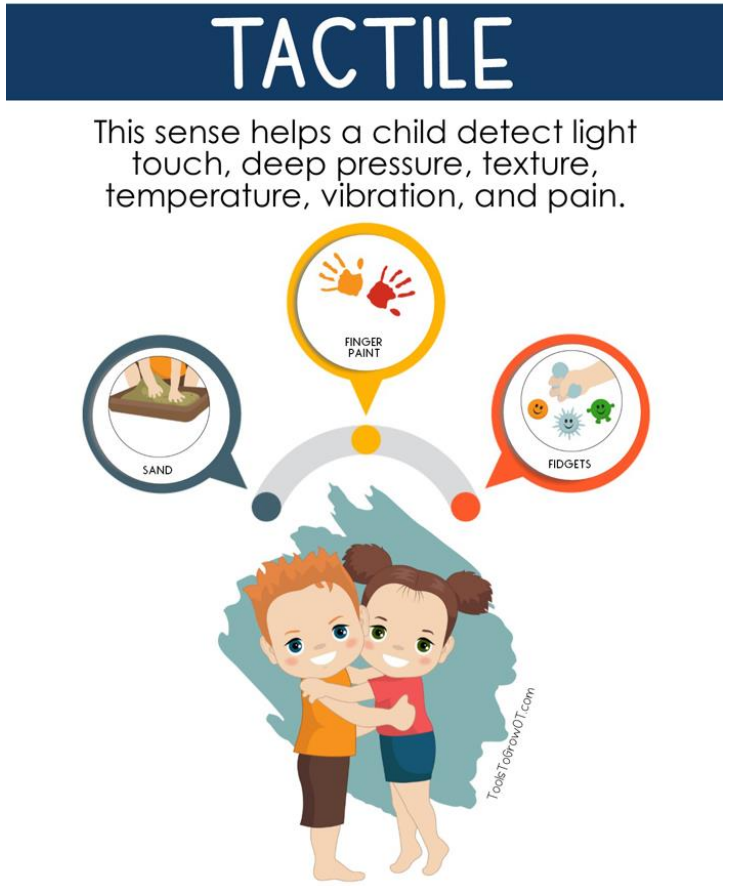
- Find touch can be painful, threatening and uncomfortable.
- Dislike having anything on hands or feet.
- Find brushing and washing hair uncomfortable because head is sensitive.
- Only tolerates certain types of clothing or textures.

Lower sensitivity may mean that some people:

- Need to do hold others tight so before there is a sensation of having applied any pressure.
- Has a high pain threshold.
- May be unable to feel food in the mouth.
- May self-harm.
- Enjoys heavy objects e.g. weighted blankets.

Enabling the Environment (Touch)

How schools can make reasonable adjustments



Higher sensitivity

- Allow for uniform/clothing accommodations.
- Allow for extra personal space *(lining up, circle time, assemblies, coat peg)*
- Provide alternative non-contact outdoor/ PE activities.
- Extra time to transition between classes may be helpful.
- Modify art and craft activities to make them less challenging e.g. allow the child to use a tool rather than having to directly touch the materials.
- Do not force the student to join in. Offer any new tactile experiences in small amounts at first.

Lower sensitivity

- Avoid light touch.
- Give big bear hugs or use a weighted blanket.
- Offer messy play activities or use tactile materials within curriculum topics.
- Support learning about personal space e.g. mark out spaces if standing in a line.
- Offer social stories on personal space.

Vestibular



Vestibular

Vestibular

- The vestibular system includes parts of the inner ear.
- Stimulated by movement of the head.
- Gives information about movement and rotation in all directions.
- Has a role in maintaining posture and organising motor actions.



Vestibular Challenges

Higher sensitivity may mean that some people:

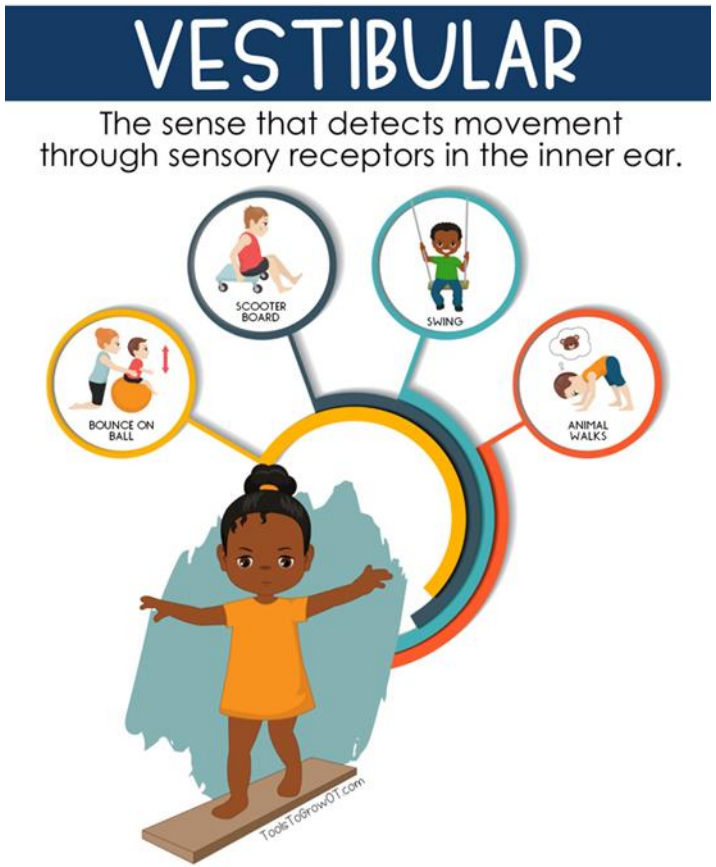
- Particularly dislike fast movements, backwards movements (e.g. on a swing) and spinning movements.
- Dislike sudden changes in movement.
- Avoid chasing games and team sports.

Lower sensitivity may mean that some people:

- Movement helps to 'switch on the brain' and increase alertness
- Crave enhanced movement and constantly move while sitting.
- Find it difficult to control the speed and intensity of movements.
- Find balance challenging.

Enabling the Environment (Vestibular)

How schools can make reasonable adjustments



Higher sensitivity

- Provide physical activities which do not involve fast or rotary movements.
- Avoid activities which involve equipment at a height.
- Offer a range of activities which involve gentle movement only.
- Ensure a stable base of support e.g. footrest at chair and toilet if required.

Lower sensitivity

- Use alternative seating e.g. specialised cushion, ball chair
- Ensure access to movement activities at regular intervals throughout the day.
- Use visual strategies to support activity in the playground e.g. traffic light system.
- Allocate responsibilities which allow movement during the day e.g. taking messages to the office, collecting in homework.

Proprioception



Proprioception

Proprioception

- Organs of proprioception are the receptors in muscles and joints.
- The body's ability to sense its location, movements and actions.
- This system leads to body awareness.



Proprioception Challenges

Proprioception challenges may mean that some people:

- Appear clumsy or uncoordinated.
- Like to lean on everything.
- Seek out more sensory input by banging objects, jumping about, stomping when walking, or bumping into people.
- Bite or suck on fingers.
- Enjoy deep pressure such as tight bear hugs, tight clothing or weighted items such as heavy blankets.
- Have difficulty in regulating pressure so may break items or struggle with writing because the pressure they use on a pen can be so heavy.

Enabling the Environment (Proprioception)

How schools can make reasonable adjustments



- Offer weightbearing activities e.g. crawling, push-ups and resistance activities (*e.g. pushing/pulling.)*
- Provide opportunities for heavy lifting e.g. carrying books.
- Cardiovascular activities *(e.g. running, jumping on a trampoline.)*
- Offer sensory objects to squeeze *(e.g. blue tac, squeeze ball.)*

Interoception



Interoception

Interoception

- Interoception is the ability to detect and attend to internal bodily sensations.
- It helps to understand what is going on inside of the body like hunger, thirst, feeling hot or cold, fatigue, or a full bladder.
- Also uses the organs to identify emotions.



Interoception Challenges

Higher sensitivity may mean that some people:

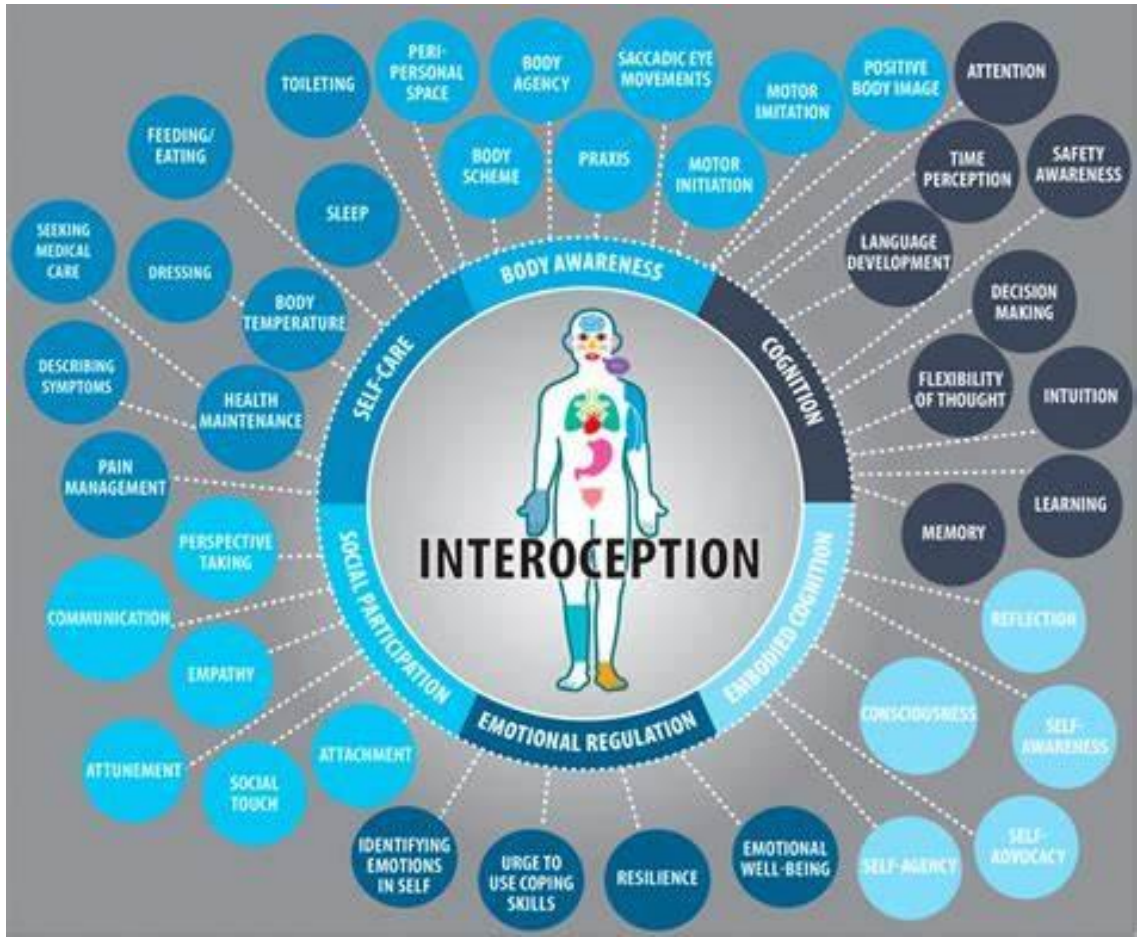
- Are overwhelmed by feelings that are a part of the body's day-to-day functioning. (e.g. being overly aware of own heartbeat).
- Find individual sensations difficult to interpret.
- Often have the overriding sensation of anxiety, stress and/or distraction, as well as discomfort and pain.

Lower sensitivity may mean that some people:

- Find it difficult to manage, recognise and respond to their emotions and social interactions.
- Find self-regulation is difficult. This is the ability to express emotions and feelings, appropriate to context.
- Find self-management is difficult. This is the ability to respond helpfully to biological needs such as hunger and thirst.

Enabling the Environment (Interoception)

How schools can make reasonable adjustments



Higher sensitivity

- Offer a calming space when needed.
- Talk about emotions and feelings and what they look like.

lower sensitivity

- Offer verbal or visual prompts to eat, drink and/or go to the toilet.
- Link physical state to a name and action *(e.g. sweating-too hot-drink water.)*
- Talk about emotions and feelings and what they look like.

Sensory Circuits

What are sensory circuits?

They can look like circuits we might do in the gym. They are a sequence of physical activities that are either alerting, organising, or calming. Sensory circuits should be physical, active, and fun. It is important to remember they are not like playing in the park. They should always be structured and cater to the child's needs.

Why do sensory circuits help?

- Sensory circuits can help them by giving them the sensory input that they need in order to focus.
- Some children may benefit from spending more time with alerting, organising or calming activities to set them up for their next activities. Therefore, adapt the circuits to their moods on that day (full of energy – calming circuit). Speak to OT about this if unsure.
- Remember that every child is different, therefore their sensory needs and tolerance for each activity will be different.

Sensory Circuits

When should I use a sensory circuit?

- Sensory circuits can be used at the start of the school day or after lunch because they are a great way to get children settled so they can engage in the classroom.
- Sensory circuits should be done regularly, and the circuit should take around 15 – 20 minutes, with three to five minutes spent on each section.
- Some children may need more circuits during the day. It's important that the activities reflect their sensory preferences too, and that you avoid any sensory stimulation that they do not like.
- Children should be encouraged to take part in the sensory circuits and be supervised at all times.
- It is possible to transfer techniques from sensory circuits to the learning environment to help support a child (shorter movement breaks in class time using classroom equipment).
- Have fun and don't forget the goals you set – are the sensory circuits helping?

Alerting

When should I use an alerting circuit?

These activities prepare the brain for learning. They activate the vestibular system and provide proprioceptive stimulation. The vestibular system is our sense of balance and proprioception is our sense of where our body is in space.

Activities

- Running
- Jumping
- Hopping
- Star jumps
- Skipping
- Dancing
- Walk, hop, jump or skip over the stepping stones as fast as you can.
- Allow pupils to be pulled along by rope or hand while sat down.
- Encourage fast motions on the scooter.
- Pupil can push themselves by kicking off the wall.





Alerting

Important

- Do not encourage use of the climbing frames if the pupil is extremely heightened and dysregulated, as we should never encourage jumping from these.
- If the child becomes fatigued at any point in the circuit, supplement some breaks or calming strategies.
- Be mindful if the child is afraid of heights or has any gravitational insecurity, that some of the swinging activities may not be preferred.

Organising

When should I use an alerting circuit?

- If the pupil is very lethargic in presentation
- Low mood or low energy
- Appears tired or drowsy
- Needs a movement break to help waken up senses.

Activities

- Simon says
- Stepping stones game
- Pat your head & rub your tummy
- Throw & catch
- Heads, shoulders, knees & toes
- Space the stepping stones apart so pupils have to jump to the next one.
- Ask pupil to balance on each stone for 5 seconds before moving on.
- Allow the pupil to pull another pupil around.
- Encourage the pupil to lay on the scooter on their belly and use arms and legs to push themselves around the room.

Organising

Important

- Do not encourage use of the climbing frames if the pupil is extremely heightened and dysregulated, as we should never encourage jumping from these.
- If the child becomes fatigued at any point in the circuit, supplement some breaks or calming strategies.
- Be mindful if the child is afraid of heights or has any gravitational insecurity, that some of the swinging activities may not be preferred.

Calming

When should I use an alerting circuit?

- If the pupil is ‘on the go’ or seeks a lot of movement.
- Calming activities should focus on proprioception and deep pressure, so the individual leaves the circuit feeling calm, focused and ready to engage.
- Deep pressure works by applying weight or pressure to provide proprioceptive input, which calms the central nervous system.

Activities

- Listening to calming music
- Guided meditation
- Massage
- Rolling object over legs/ body & applying gentle pressure
- Applying equal pressure with both hands
- Controlled slow linear swings

Calming

Important

If don't have access to 4D Hall equipment, consider:

- Rolling a gym ball over a child's back while they are lying on their front
- Rolling the child up tightly in a blanket
- Pushing against the wall with flat palms
- Lying on the floor and pushing against the wall with your feet
- Listening to relaxing music throughout or a meditation