ROTHERHAM
INTEGRATED CARE PARTNERSHIP | HEALTH AND SOCIAL CARE

SENSORY STRATEGIES

SCHOOL INFORMATION PACK

Information and tips for schools on helping children with sensory processing difficulties

What is sensory processing?

Sensory processing refers to the way we interpret information received from the environment and from within our bodies. This information gives us a sense of who we are, where we are and what is happening around us.

Our senses are **sight**, **hearing**, **touch**, **taste**, **smell**, **proprioception** (body awareness) and **vestibular** (balance and movement).

When our senses are integrating correctly we are able to respond appropriately to any sensation, for example, we are able to take off an itchy jumper or take a deep breath to smell the flowers.

What happens when a young person experiences sensory processing differently?

A young person may have difficulty working out what is happening inside and outside of their bodies. The sensory information may not be accurate, for example, the noise of the school bell is like someone screaming in their ear, or a piece of artwork on the wall keeps grabbing their attention because their brain hasn't registered they have seen it before. Standing in the queue at lunchtime makes them on "high alert" in case someone brushes past them, which can be painful.

Getting changed for PE is very difficult because of poor balance and not knowing where their hands are to put their jumper on when they can't see their hands.

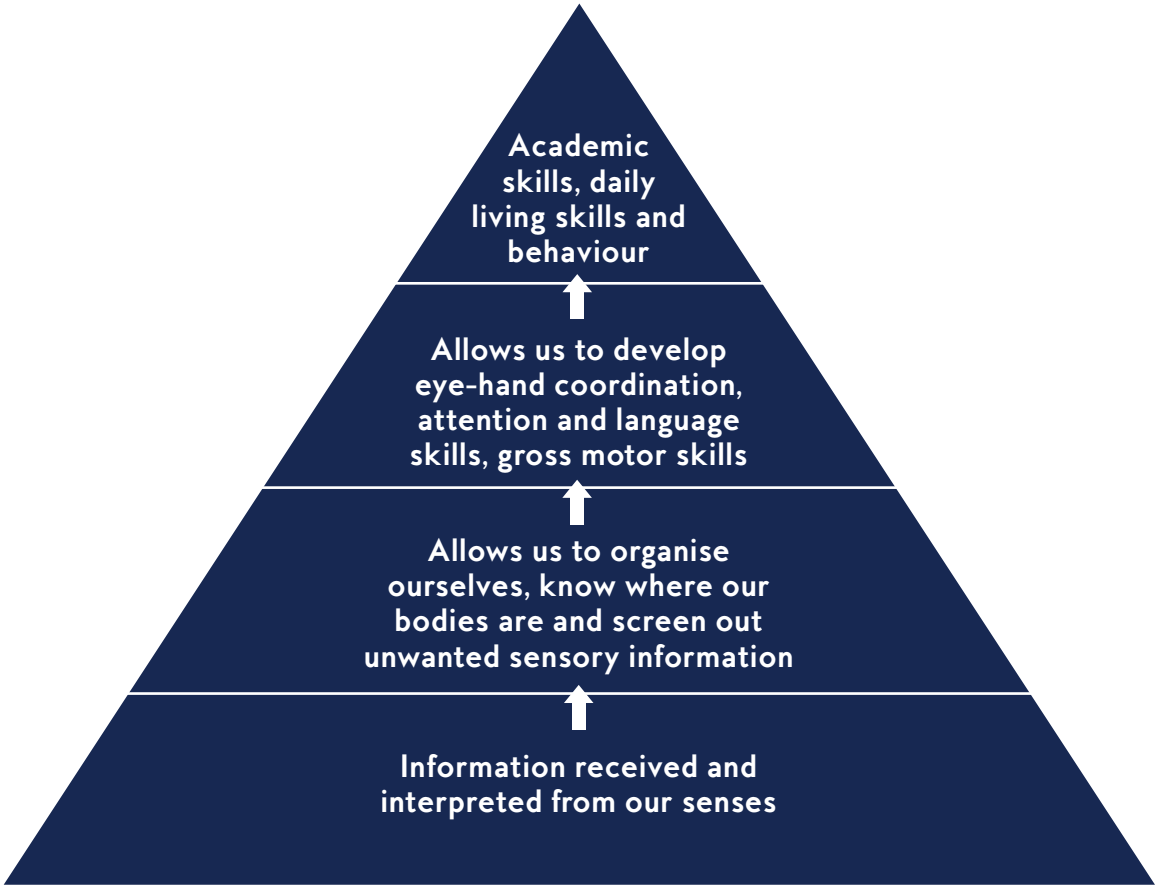
A young person may move constantly to get extra feedback if their body is not providing enough information as to where their arms and legs are. This is difficult in the classroom when they need to keep still and write.

Most people get used to their own sensory preferences and make choices about their daily activities appropriate for them. Some people don't like the feel of polystyrene, some prefer quieter pubs and restaurants, some crave theme parks.

However, children may struggle to communicate how they feel. They may be disorganised in a world they cannot make sense of.

These children need support from those around them to learn strategies to make life a little easier.

Our senses are the building blocks for all other skills we learn and use in life:



Adapted from Williams and Shellenberger (1994)

There are seven senses explained in this resource pack:

Tactile | Taste | Smell | Vision | Auditory | Proprioception | Vestibular

Each sense has its own section which is divided into:

- A description of the sensory system.
- What happens when a child experiences this differently?
- Ways to help – suggestions on strategies/activities that may help.

Research shows that 20% of the school age population have sensory processing difficulties that impact on their ability to do every day activities. You don't have to have a diagnosis of cerebral palsy, ADHD, or autism to have sensory processing difficulties, although they are more recognised with these diagnoses. Often we see bright children not achieving because they are struggling with sensory processing and then they can get labelled as 'bad'.

Emotional, social and behavioural responses

Children who have difficulty regulating their sensory systems often show signs of difficulty regulating their emotions. This can be seen in temper tantrums, crying easily, unable to read signs of others, snapping for no apparent reason, hurt easily. Increased/decreased fear/anxiety. This is because the limbic system in the brain is responsible for learning, memory, eating and drinking behaviours, aggression, sexual behaviour, motivation and expression of emotion. Its purpose is to integrate and co-ordinate out inner and outer world. It links with all other sensory systems.

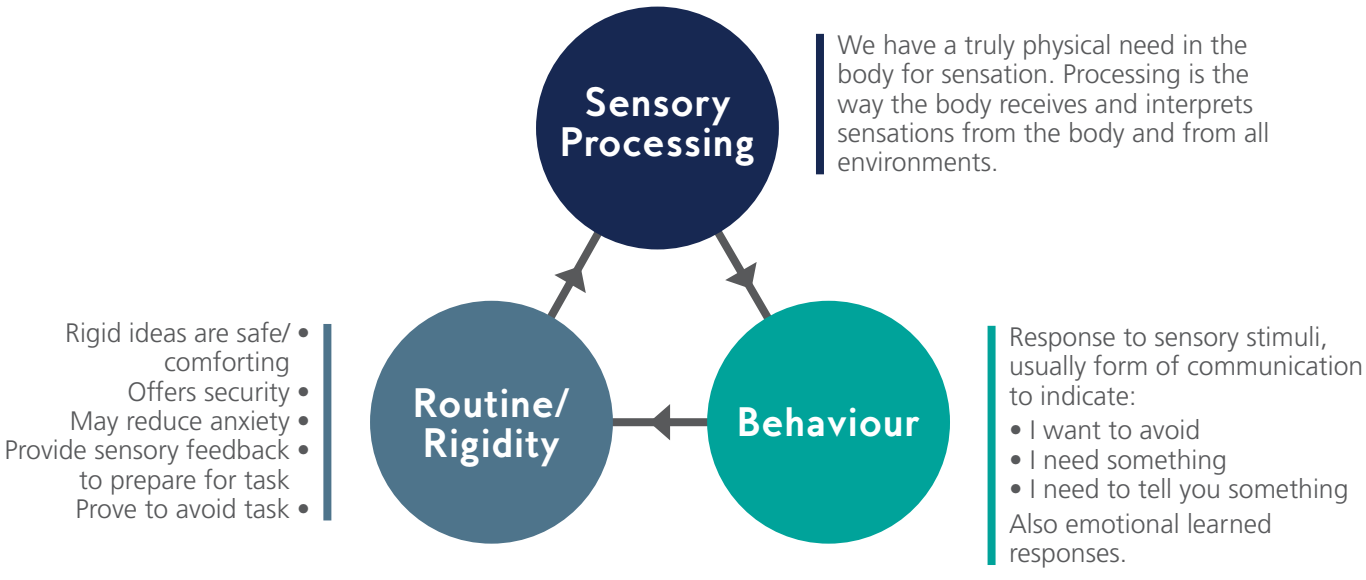
It is important to be aware that children with sensory processing differences are likely to show emotional differences too.

When faced with perceived threatening sensory stimuli, it is likely to evoke the flight or fight response. Imagine if you dislike the touch of chalk so much that it evokes a gag reflex. You would want to avoid it; when you next come across chalk, you would become anxious, with all the associated physical responses, varied heartbeat, sweating etc. This may be how some of your young people feel.

Other indicators of sensory difficulties are the social, emotional and behavioural responses to sensory stimuli, which may include:

- Temper tantrums
- No sense of humour
- Cries easily
- Can't express emotions
- Uncooperative
- Anxious
- Poor self-confidence and self esteem
- Immaturity
- Avoids eye contact
- Overly affectionate
- Can't read body language
- Frustration
- Difficulty coping with changes in routine

Relationship between sensory processing, behaviour and rigidity



Are sensory issues causing the behaviour?

Making **SENSE** of the situation. Using this very simple strategy to help understand and address any challenging movement, when the question comes into your mind? Is it sensory or behaviour? How can I help my student?

S Stop assess situation behaviour happens for a reason.

E Environment change? What can I change, add or omit?

N Note students' response to the change.

S Sensory strategies and tools, use the resources and ideas available in this pack.

E Embrace the positive and learn from the experience.

(VOSS, 2011)

Framework for working out which sensory system is involved and how to help

1. Observe how the child responds in difference environments within the school or within different spaces within the classroom, at different times.

What has happened just before? Is this always the case or was the event unusual?

2. What are the identified areas of difficulty?

3. What sensory experiences does the child appear to react to, can you work this out?

4. Which systems are thought to be affected?

- **Tactile** (touch)
- **Visual** (sight)
- **Audiology** (hearing)
- **Olfactory** (smell)
- **Gustatory** (taste)
- **Proprioception** (body awareness)
- **Vestibular** (movement sense)
- **Interoception** (inner body senses)

5. Consider what changes can be tied to the environment or strategies implemented. For example:

- Distractions
- Sound levels
- Is the lighting too light/dim?
- Does it make a difference if position of table and chairs in class is changed?
- Can the menu be changed?
  - Opportunity to try new foods
  - Can food be used to help alertness level?
- Can friendships offer support?
  - Supervision – level required
  - Instructions – are these clear, concise, brief?
  - Modelling – is modelling appropriate?
- Breaks – are they sufficient?
  - Can more be included in class? e.g. getting pencils, handing out books
  - Is crowding an issue, can child leave class earlier or last?

Below is an example of how the framework can be used.

1 Child is observed to become upset at assembly time, hits and annoys other children

2 Sitting still in assembly time in own space

3 Sensory experiences the child appears to react to

Does child dislike clapping or loud noise in assembly?

Does child become startled at sudden noises?

Are there strange smells in room, smells from kitchen as dinner is prepared, smell of odour after PE?

Does child fidget on floor, annoy child next to them, avoid sitting on hard assembly floor?

Is temperature in room too hot/cold?

Does milk time follow assembly or have tastes s/he doesn't like?

Does child dislike bright lights, lights too dim is there lots of distractions?

Is room confusing?

Is child fearful of assembly time, due to past experiences?

Is child anxious doesn't know what to expect.

Is child uncomfortable on floor, unable to control 'posture?'

Is seating to spaced/closed?

Does child find it difficult to sit still?

Seeking movement spinning on floor.

4 Sensory systems affected

AUDITORY

OLFACTORY

TOUCH

TASTE

VISUAL

EMOTIONAL

PROPRIOCEPTION

VESTIBULAR

5 Changes/strategies

Prepare child when clapping coming, or music. Discuss background noises and what they are.

Have handkerchief tissue with smell child likes.

Sit on own cushion or chair.

Discuss changing times or varying food/drink type to suit.

Can the lighting be changed?

Prepare the child and discuss and acknowledge their anxieties and provide reassurance.

Can seating be changed?

Allow movement breaks before and after.

Tactile (touch)

The tactile system has two functions, one for protection and one for added detail, development of precision skills.

Protective

Our skin has receptors within it that respond to pain, temperature and light touch. This alerts us to potential threats and allows us to react appropriately. The information is interpreted and our brain then decides as to how we should act.

Discriminative

Our skin is our largest most sensitive organ; it has different receptors that give more detail about what the skin is feeling. This also responds to pressure applied to the skin. Through touch we gain information about where and how our bodies are positioned. We get information about objects and our environment and to develop refined fine motor skills.

With smoothly operating protective and discriminative touch a young person will be comfortable and willing to interact with objects and people and will be in a perfectly alert, yet calm state to learn.

What happens when a young person experiences touch differently?

One of the most common sensory difficulties is being **overly sensitive to touch**. These young people may show the following behaviours in school:

- Avoidance of messy activities such as art and cookery and becomes distressed if pushed to do it
- Dislikes being in bare foot for PE.
- Avoid eating with their fingers.
- Dislikes physical touching, especially light touch or brushing past in queue and will become upset.
- Always fiddling or feeling things around them.
- Dislikes crowds.
- Dislikes certain texture of clothes.
- May dislike certain foods due to texture.
- May dislike brushing teeth or hair, having haircuts.
- Responds with alarm when face/body is washed.
- Avoids walking/crawling on surfaces such as rugs or grass.
- Particular about wearing certain uniform, dislike long/short sleeves, won't wear jumper.
- May have poor social relationships due to dislike of touch.
- If touch perceived as a threat they may act with physical or verbal aggression or avoid situations.
- May avoid putting hands in sand, finger paint, glue, baking, textiles and other "messy" activities.
- Overreacts when falls over in playground.
- Tired at school as not sleeping – may be due to dislike of touch of blanket, quiet.

On the other hand a young person may be more **under sensitive to touch** than usual. In the classroom you may see the following:

- Has messy face and hands and doesn't seem to notice.
- Doesn't know when they are being touched, bumped.
- Leaves clothing twisted on their bodies and don't seem to notice.
- Difficulties manipulating pencils, scissors etc.
- Does not react to painful experiences.
- Difficulty manipulating tools and objects.
- Craves touch, may touch constantly or indiscriminately.
- Regularly bumps into doors, tables chairs.

Supporting strategies

A young person who is **overly sensitive to touch** may prefer:

- To stand at the end or beginning of queue at lunchtime. This will decrease the chance of bumps.
- Peg at the end of cloakroom rack, or drawer at the end of cupboard.
- Arranged seating to minimise the risk of being bumped by classmates
- Modifications to the art activity to accommodate their sensitivity to touch. Be aware that materials such as glue, finger paints, clay, papier-mâché, etc., may cause the young person to have an aversive response. Using tools (i.e. hammer, paint brush, etc.) may help the young person participate more fully.
- To use some of the heavy work activities (see proprioception section). This can help to reduce the anxiety and impact around tactile experiences.
- Avoid light touch, use firm pressure when touching the young person and always approach from the front.
- To use 'fidget' toys, permit them to use one object. Set boundaries for them using it and ensure that this is not negatively impacting on their attention to task. E.g. use when standing in the line after break before lesson begins, during listening time.

A young person who is **under sensitive to touch** may benefit from:

- A variety of touch activities – massage, exploring objectives with hands
- Contrasting tactile experiences within learning – ie sandpaper letters/drawing in shaving foam
- Fidget toys – probably more textures and firmer.

Taste and smell

Smell travels directly to the centre in our brain that controls our emotions, memory and learning. Smell is closely linked to our sense of taste, think about how bland food tastes when we have a cold for example.

Our brains are wired so that we are able to respond appropriately to tastes and smells. A bad smell for example doesn't go away our brains just stop noticing it; otherwise we would be totally distracted by it. If we smell burning we know to act on this appropriately.

What happens when a young person experiences taste and smell differently?

Again there are two different kinds of difficulties that may occur, the first being an **over sensitivity** to smells and tastes and the second an **under sensitivity** to taste and smell. The latter of the two is less common.

Overly sensitive, these young people may show the following behaviours in school:

- Avoids food most young people their age enjoy.
- Crave or get upset by certain tastes and/or smells and don't appear to get used to the smell.
- Is distracted by a smell in the room and can't refocus on the lesson.
- Becomes nauseated or gags at smells others are only mildly affected by.
- Dislikes lunchtimes and smell of lunchtime hall.
- Gags at certain smells, taste, foods.

Under sensitive, these young people may show the following behaviours in school:

- Craves strong flavoured food e.g. chillies, lemons, curries.
- Packs food into mouth before swallowing.
- Eats food very quickly.
- Does not seem to notice smells that typically bother others.

Supporting strategies

Try redirecting the young person to carry out some of the heavy work activities to distract them and also calm their overly alert sensory systems down. It can be helpful, if the school has two lunch sittings, to allow the young person free time first.

- Allow them to have their favourite scent or an object that they like the smell of to block out the 'offensive' smell.
- Remember we all have food preferences, some food types we just don't like!!! And that is ok.
- If craving strong foods, let them eat spicy and sour foods, it may be important to help them regulate. Add spices for strong flavour to food.
- Strong mints may be regulating for your student. Allow to have a mint whilst listening or sitting to do a task for increased focus and attention.
- Offer taste preferences during snacks and challenging times, e.g. studying for test, homework, chewy foods help regulate. Involve in food as much as possible, not around mealtimes so there is no pressure.
- Encourage cold food first.
- Encourage crunchy foods with soft food.

A young person's dietician or speech and language therapist may also be able to help provide further advice.

If there are concerns about nutrition and weight, e.g. losing weight, refer to dietician. If there are concerns about food and drink going down the wrong way, coughing at mealtimes or difficulty chewing that limits the range of textures they eat consider reference to a speech and language therapist.

Visual system

Before considering visual sensory systems it is important to check with parents if the child has had a recent eye sight test at opticians or hospital.

There are two aspects of our visual systems the first is our **eye movements** and the second **visual processing**.

Eye movements

The movements of our eyes are controlled by muscles, these allow us to follow a moving object 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. Smooth eye movements allow us to track, fix and scan effectively.

Visual processing

Visual processing is the brain selecting and responding appropriately to visual input. This allows us to process what we see, when we can visually process we are able to concentrate on what we are looking at and not be distracted by other visual stimuli, e.g. pick out picture on the wall amongst several or find a pair of socks in the drawer. This is dependent on the messages getting to the brain to process.

What happens when a young person experiences this differently?

If difficulties with **eye movements** exist you may see the following difficulties in school:

- Eye contact is limited as they struggle to maintain focus.
- Use of fingers when reading to keep their place even when not age appropriate.
- Repeatedly losing their place when copying from the board.
- They may struggle to judge distances so bump in to the furniture in the class room.

If difficulties exist with **visual processing** you may see the following difficulties in the classroom:

- They struggle to cease noticing the pictures or the people in the room.
- They may cover their eyes when the florescent lights are switched on.
- Complains of headaches, rubbing eyes or squinting.

Supporting strategies

Young person with difficulty co-ordinating their eye movements:

- Young person can sit at the front of the class so they are not distracted by others when looking at the board.
- Provide a written sheet on the desk to copy from rather than copying from the board.
- Use large print books/work sheets.
- Use a finger or ruler to mark where reading.
- Use a typo scope when reading (cut out a window in a piece of card and show only what is needed to be read).
- Photocopying work onto cream paper can also help.
- Use an angled writing surface to reduce the distance the eyes have to travel from the board to the paper.

Young persons who have difficulty processing the visual information

- Keep visual distractions (i.e. art projects on the wall, bulletin boards, hanging projects) to a minimum to help facilitate the young person's attention to classroom instructions. Have the young person sit near the classroom teacher to facilitate the young person's ability to attend to directions and tasks.

- Use different colours for different lines on the whiteboard.
- Building up the sides of a desk with cardboard to block out distracting stimuli can help however please consider the school environment and the sensitivity of the young person.
- Avoid clutter around the whiteboard.
- Sit student away from any flickering lights.

Primary age strategies

- Encourage a child to make shapes using different materials i.e. finger paint, play dough, sand, clay, shaving foam
- Have children follow mazes, on paper or any other way you can think of. Dot to dot is also very useful.
- Make designs and repeating patterns getting increasingly more challenging.
- Practice cutting along straight and curved lines.
- Lie on back and track birds or clouds with the eyes without moving the head. Some brain gym exercises are good for this.

Secondary age strategies

- Adapt technology or art lessons to use cutting and drawing skills, i.e. drawing and cutting patterns or templates. Over learning of these techniques needs to be delivered little and often, and alternative aids may need to be used to ensure a successful outcome of the lesson.
- Colour co-ordinate timetables.

Auditory (sound)

If there are concerns in this area a hearing test should always be undertaken to rule out any other medical difficulties.

Auditory processing refers to how the brain recognises and makes sense of sounds. Sounds consist of loudness, pitch, how long it lasts for and where it is coming from. We automatically put all of this information together and respond appropriately to it.

We can usually cut out unwanted noise so we can concentrate on the task we want to.

What happens when a young person experiences this differently?

There are potentially two types of auditory processing difficulties the first is an **over sensitivity** to sounds and the second is an **under responsiveness** to sounds.

For young people who have auditory processing difficulties noise can be painful if over sensitive or they do not register noise if under sensitive.

If difficulties exist with **over sensitivities** you may see the following behaviours in the classroom:

- Puts hands over their ear when the noise levels rise in the class or the bell rings.
- Over react to sounds that others barely notice.
- Can't stop noticing the noise of the fan in the back of the classroom, so can't attend to another task, for example buzzing lights.
- Difficulty focussing on foreground sounds and blocking out extra background sounds.
- May appear inattentive.
- May need to make a lot of effort to concentrate.
- Short attention span.
- Behaves erratically when changing classrooms.

If difficulties exist with **under responsiveness** you may see the following behaviours in the classroom:

- The young person speaks in a loud voice to increase noise and alert level or drown out other noise.
- May hum to themselves, to increase noise and alert level or drown out other noise.*
- Seem to ignore you when you call their name even though you know they have heard.
- Difficulty pronouncing words.
- Difficulty using prepositions.
- Trouble hearing in groups.
- Difficulty remembering and sequencing multi-step directions.
- May appear inattentive.
- Short attention span.
- Difficulty sequencing verbal directions.

*Please note that these behaviours may also be seen in young persons who are over sensitive to sounds as they are struggling to screen out surplus noise in order to attend to your voice or they may hum as a way to block out other unexpected sounds.

Supporting strategies

Over sensitivities

- Respect their sensitivities it does really hurt!
- Try to forewarn the young person of any loud noises before they occur (i.e. bells/fire alarms).
- To minimize auditory distractions, a classroom with a rug or carpet would help decrease background noises.
- Allow them to wear ear defenders or ear plugs when there is expected to excess noise in the room.
- Acknowledge existing noises, tell them what it is and then bring back.
- Allow extra time or to leave before/after crowded change over time.
- Appropriate use of mp3 player, iPhone plugs with music can help aid concentration on task.

Under sensitive

- Only speak to the young person when they are facing you and looking at you.
- Use straight forward short sentences.
- Speak loudly and clearly to these young persons at all times.
- Start with one instruction and increase as the young person is able to retain more information.
- Ask the young person to repeat the instruction to you.
- Wait for the young person to process the information and respond, which may take them longer.
- Reduce extraneous noise *OR* wait until it has gone before giving instructions. (Do not expect a young person with these difficulties to concentrate when there is a lot of noise going on outside the classroom).
- Give written instructions, prompt sheets, as well as verbal ones.
- Repeat sentence with same words – do not paraphrase.
- Ask child to repeat back to check understanding
- Model good speech. Even if child has trouble responding they may have understood what you said.
- Allow a child to respond where possible in their own time. Don't interrupt, rush or pressurise the child.
- Use rhythm and beat. Use rhythm to help memory by substituting own words to a familiar tune.
- Encourage the use of drama. This can be used to reinforce auditory processing.
- Get child's attention before talking. Use a physical prompt such as patting a hand to ensure their full attention.
- Reduce auditory distractions. These compete for a child's attention. Other conversation and movement are the worst.

If you have concerns about understanding instructions after putting strategies in place consider referral to a speech and language therapist.

Proprioception and vestibular (movement systems)

A young person learns movement through development of the **proprioceptive and vestibular system**. Integration of these systems enables a young person to develop a sense of body awareness, balance and motor control that allow them to freely move. Each system is described below.

Proprioception

Proprioception is 'how the body senses itself', our body awareness. This is our subconscious sense that tells us where our arms and legs are in space without us having to look at them. This information is being passed on from our muscle and joints to our spinal cord and to our brains even when we are still. This ensures that we can be upright and not slipping off our chair, it also provides us with an internal map of our bodies. It is the sense that helps us to grade the force we place through objects. It impacts on the resting tone of our muscles. Proprioception is thought to be able to calm and override other systems therefore use of proprioceptor activities is always beneficial.

What happens when a young person experiences proprioception differently?

The common difficulties with the processing of proprioceptive information appear to be a lack of sufficient information. This can cause young person to go looking for information often termed 'sensory seeking'. If difficulties exist you may see the following behaviours in the classroom:

- Fidgeting in their seat in an attempt to gain more information from the muscles and joints as to the position of their body parts.
- Heavy handed, struggling to grade the force they place through a pencil, or when playing with toys.
- Struggles with PE in particular apparatus and ball games.
- Looking at their hands when writing or when using a mouse on a computer.
- Looking at their feet when trying to ride a bike or climb up the apparatus.
- Chews hard on their pen or sleeve.
- Bangs into other young person but isn't an aggressively natured child.
- Difficulty sitting on carpet.

Please note, children who do not sit still should not always be considered as having behaviour difficulties.

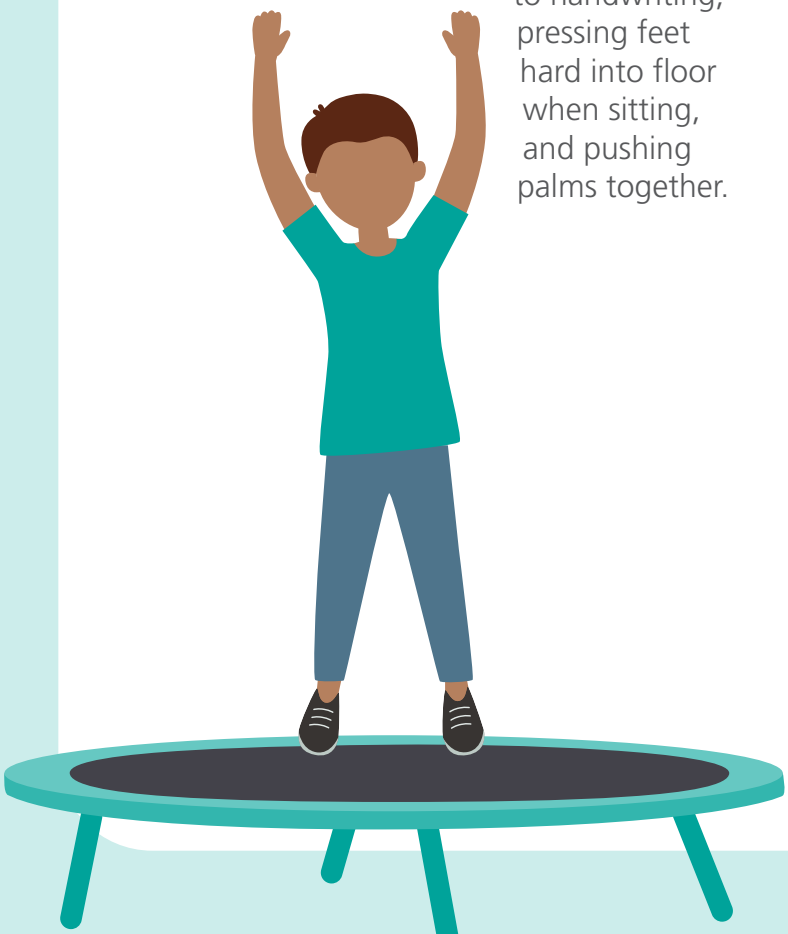
Supporting strategies

- Allow the child to wear a back pack with a few books in during times of transition or when sitting may help to keep them calm.
- Prior to handwriting have the child do some warm ups including pressing palms together, pulling each fingertip, press the palms on to the desk, chair push ups with hands flat on the seat pushing their body up.
- The child uses a lap weight/shoulder (such as a wheat pack)
- Use a 'move n sit' cushion to sit on to give them additional feedback.
- Use bean bags for down time, rest rooms.

Heavy work activities

These can be used during 'movement breaks' or incorporated into PE sessions.

Activities that require movements that are forward and backwards are calming rather than those that are in circles. Space hoppers, trampoline. Pushing and pulling games, pushing up on hands on chair prior to handwriting, pressing feet hard into floor when sitting, and pushing palms together.



Pushing trolleys e.g. meal, lunchtimes, helping set-up PE equipment, carrying bags of footballs, moving goalposts are other ideas for heavy work.

Movement/learning breaks

Have these scheduled into their timetable at times when they usually need to be on the move rather than waiting for them to begin moving.

You are trying to pre-empt it so that their body is getting the movement it needs in a more functional and structured way. They will hopefully not need to fidget as much if these activities are done regularly during the day.

Try a combination of these for 5–10 minutes directly before you want them to focus their attention well.

- Getting up to hand out books/pencils.
- Taking register to reception.
- Moving workstations (not always sitting in the same place).
- Moving between classes in secondary school acts as movement break, but be aware if the student is sensitive to being bumped and knocked.
- Some students may need movement breaks more often.
- Tasks, responsibilities in the classroom may help.
- Use of move 'n sit cushion provides movement and also periods of focus.

See page 26 for **10 fine motor warm up exercises**

Vestibular

How the body handles movement is down to our vestibular systems. They are located in our **inner ears**.

The vestibular sense is possibly the most fundamental of all our senses it gives us physical and emotional security when moving in space as our bodies automatically adjust to stop us from falling.

This sense helps to keep us upright against gravity it is stimulated when we move or change our head position it enables us to keep orientated when we bending over to pick up a school bag, ride in the car, walk around the nursery. More subtle vestibular activities include maintaining a seated posture and paying attention.

Our vestibular system reduces confusion about conflicting visual information, such as when a young person hangs upside down the vestibular sense confirms for the young person that their worlds haven't just turned upside down. This sense also enables us to stabilise our visual field so when for example we throw a ball at a target we can run whilst looking at the target.

The information from the vestibular senses also passes through an area of the brain that impact on our attention and arousal levels (sleep/wake cycles). Consider how you handle a baby; to wake them up and get them excited you bounce them on your knee, to get them to sleep you rock them back and forth. Consider how your young people react in class after an outside PE session.

What happens when a young person experiences vestibular movement differently?

When vestibular information reaches the brain, the brain then decides what to do with it, initially our protective reactions are stimulated do we 'not do it', 'go for it' or do we 'precede with caution'. The situation will be assessed to establish if there is any threat or danger and will then act accordingly. However, a young person with a poorly functioning vestibular system will often not act in accordance with what the activity would provoke. A young person may have an overly sensitive vestibular system which leads them to having exaggerated emotional responses to movements against gravity way out of proportion to the actual potential threat. Some young person conversely may experience an under responsiveness to movement and indeed seek out as much movement as they can.

Please note:

- A poor sense of danger can be linked to lot of different factors and is not only sensory based.
- Young people with vestibular difficulties can feel sick and dizzy very easily, or not realise when they have reached their tolerance level and vomit or experience headaches. Care should be taken when working with these young people and you should stop the activities and seek support from their GP

If difficulties exist with **over sensitivity** you may see the following behaviours in school:

- Avoids apparatus or fast moving playground equipment.
- Hesitates of avoid walking downstairs.
- Gets dizzy very easily.
- Gets car sick on trips.
- Dislike of carnival rides.
- Dislikes fit trails, apparatus, trampoline.
- Fearful of jump up and down stairs, rolling in a barrel, climbing, leaning backwards, somersaults and swinging, PE apparatus.
- They may try to control and manipulate events to avoid stressful sensations which may appear to others as obstinate and uncooperative behaviour.
- They often seek physical support from an adult.

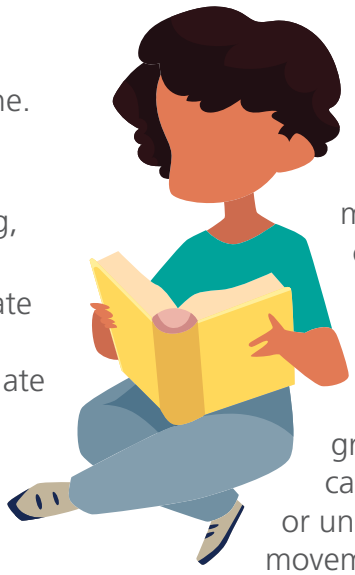
If difficulties exist with **under responsiveness** you may see the following behaviours in school:

- Moving in their seats or getting out of their seats but not necessarily in an organised manner.
- Poor sitting posture so appearing to slump over their desk most of time.
- Some young person may have low muscle tone so doing PE activities is challenging with poor balance skills.
- Does not enjoy or do well in sports.
- Often stumbles and falls.
- Difficulty co-ordinating both sides of the body, lacks hand dominance, does not cross midline.
- Confusion of right and left.
- Delay in speech, reading, writing and visual perception.
- Love of fast and moving equipment – without becoming dizzy.
- Inability to follow a moving object, draw a line, read a line of print of copy from blackboard.
- Trouble holding head up while sitting.
- Delayed balance and equilibrium reactions.

Supporting strategies

Over sensitive to vestibular movement

It is essential that the young person is in control of the amount of challenging movement experiences they will engage in. The young person should never be pushed past his or her limit. Be aware of sensory strategies you can use to make the young person feel calm, safe and secure (heavy work). These are useful to prepare the young person for challenging work against gravity and to comfort and calm them if they feel unsure or unhappy with certain movement activities.



- Use a firm, supportive seat that will not tip, to help the young person feel stable and secure whilst at their desk. Make sure their feet can stay flat on the ground.
- Use your hands to help the young person develop awareness of their body position. Always use firm ‘grounding’ touch and concentrate on the joints of the body. This will also help to focus the young person’s attention on an activity.
- The young person may become distressed or anxious with changing positions in the classroom e.g. getting down onto the floor, onto a chair etc. Use visual markers so the young person has a clear aim of where to go e.g. put their favourite cushion on the floor so they can aim to be sitting on top of it.
- Break down activities into their most basic parts. For example, it might be more successful to practise sitting on a chair than getting right down to the ground at first. If the young person is able to model your behaviour, show them what to do.

- Think about what position the young person likes to be in during different activities in the classroom. Let the young person maintain the position they are happy and secure in (e.g. cross-legged on the floor). As their confidence develops, support the young person in different, more challenging positions (e.g. flat on their tummy, on a therapy ball) and work towards them maintaining these positions independently.
- Use every opportunity to reinforce the young person's proprioception/body awareness. This doesn't always have to be done by another person. Trial using a backpack weighted with books or simple pushing/pulling games which facilitate traction and increased sensory feedback.

Primary PE strategies

- Limit the number of young people and space to increase sense of security. Allow the young person to increase their ability to work on moveable or suspended equipment at their own pace. The idea is to grade your approach very gently and allow the young person to lead exploration of the activities. Start with line on the floor to balance on, raise height as young person becomes more confident.
- Consider starting off by using mats, soft play wedges and textured materials (bubble wrap, fur, car mats etc.) to create uneven surfaces for the young person to negotiate around.
- When the young person is ready, move onto equipment such as smaller therapy balls, rolls, large wedges etc., balance beams, steps, boxes, apparatus
- Eventually the young person may be able to access more challenging equipment such as climbing frames, swings, benches etc.

Under responsive to movement or sensory seeking behaviour

Primary school classroom

- Using a 'defined' spot for them e.g. carpet square, sequencing spot during carpet time or assembly.
- A regular change of position can help them to maintain their attention e.g. Lying on tummy, sitting on the floor, sitting on a chair during circle time, kneeling.
- Work with in success; if they can stay in circle well for 20 seconds, use this as your baselines and increase your time from this point.
- Try a short walk around the circle and then try sitting again.
- Have a box of fine motor activities that they are allowed to go to during transitions between lessons or classroom activities. E.g. puzzles, threading, peg boards, pencil tasks.
- Taking regular short breaks to walk around classroom, to carry out a chore.
- Provide as many opportunities as possible for active work during the day e.g. instead of sitting to do maths have them do the problem on the board.
- Provide a solid seat with armrests of the correct height.
- Provide a tilted desk top (angle board) to help them to maintain an upright posture.
- Provide 'heavy work' activities during the day especially prior to handwriting tasks or those which require long periods of sitting. Examples: cleaning the board, handing out books, pushing tasks, moving furniture, etc.
- Providing a fidget toy to keep their hands busy. To use at their desk so as not to distract other young person.
- Provide a 'move and sit' cushion which allows them to have the sensation of movement in a more appropriate and

less distracting way for the classroom environment. (Available from www.amazon.co.uk)

- Assign active tasks to the young person who seeks movements such as handing out books, moving chairs, giving out art supplies.

Secondary school PE strategies

General activities that be adapted for any child.

- Rolling on the floor or down a grassy hill.
- On a tyre, swing or a merry go round, a swivel chair can also be used. Alternatively sit the child on the floor and allow them to spin.
- Trikes, bikes and scooters, these help children improve their balance, motor planning and motor coordination.
- A sandy beach, a grassy meadow, a cushion surface are good things to use because they require the child to adjust their bodies as they move.
- A rocking horse, chair or gym (therapy) ball or space hopper provide a calming activity as well as an aid to organisation skills.
- Riding, balancing and walking on a see-saw helps them to organise their body when they move.

Proprioceptive system

Activities

- Carrying heavy objects helps the muscle tone and can be a calming activity.
- Carrying helps to provide proprioceptive input by providing a resistance. This can also helpas a calming activity.
- Using monkey bars provides a stretch to the muscles and helps to develop upper body strength.
- Deep pressure can help to calm children by offering weighted items such as lap pads, shoulder wraps. Some children can be encouraged to give themselves "a big hug" either by wrapping their arms round themselves or by using a blanket/ lycra wrap.
- Two children sit on the floor together back to back and then try standing up together.

These activities are very useful to enable pupils with proprioceptive and vestibular difficulties develop balance, body tone and improve arousal level for optimum learning. However they require repetition, so little and often is necessary.

Developing a sensory friendly school

Whole school approach

The following provides information on general principles and strategies that support a whole school approach which are suitable for all children particularly those with sensory differences.

1. Advocate flexible teaching and learning i.e. taking account of auditory, kinaesthetic (inc. tactile) and visual learning styles.
2. Celebrate all learning whether within school or outside school so that children can excel in their own (sometimes narrow) interests.
3. Provide safe (quiet, comfortable) spaces in school for calming at all times. Difficulties can occur especially during playtimes, changes, times of less routine (i.e. Christmas).
4. Ensure that all relevant information is passed to the next teacher and/or school. Encourage the next teacher to visit your classroom to observe the child in situ.
5. Whole school ethos promoting such activities as: Big moves, Smart moves, Brain Gym, yoga, motor control exercises, multi-skills, sensory circuits.
6. Encourage extended out of hours activities (not always competitive), e.g. drama club, football, Tai Kwando, multi-skills, dance, music.
7. Specific learning difficulties:
   - Dyslexia
   - Dyspraxia
8. Celebrate different recording/learning styles through school display, ICT, performances and tournaments.
9. Increase awareness of all staff to sensory difficulties. Ensure that all lunchtime staff understand the issues both during dinner breaks and in the playground.

General classroom strategies

1. Check that the class environment meets needs of different children.
   a. Have an area (if possible) where there is less sensory stimulus so that they can work at times without distraction and they don't distract others.
   b. Have an area where they can go and calm down. These areas need to be separate from facilities used for isolation and exclusion. They should be seen as places of safety and be of low stimuli (visual,auditory).
   c. Clearly display:
   - timetables (visual and interactive if possible), capable of being changed on a day to day basis
   - keywords/topic vocabulary
   - clearly labelled areas and resources
   - clearly labelled expectations/rules and objectives.

   d. Ensure odours are as neutral as possible.

2. Consider splitting the lessons that involve a lot of sitting, for refocusing and calming through learning breaks.

3. Adapt lessons to take account of the social skills i.e.
   - Paired learning rather than a group
   - Staff modelling cooperative skills
   - Mix groups by social ability as well as learning styles.

4. Facilitate consistency in routines, rules and boundaries from all adults including supply teachers, lunchtime staff.

5. Plan transition times i.e.
   - Around class activities
   - Lesson to lesson (especially important in Secondary schools)
   - Playtime to classroom.
   - Children with sensory issues find change, crowds, noise and smells very difficult to cope with.

6. Have a range of resources at your disposal i.e.
   - Difference size/colour/shapes of writing implements.
   - Different methods of recording.
   - Fiddling aids (blue tac, bands, squidgy balls)
   - Different resources for calming, extension, withdrawing.

7. Don't assume what makes us feel safe/happy is the same for all i.e.
   a. Some children may find creative play/art/cooking/textiles really challenging (tactile defensiveness).
   b. Eating can be difficult for some children with tactile or odour defensiveness.
   c. Crowded situations including lining up can be very difficult for children with sensory differences.
   d. Playtimes are difficult for many children across a whole range of sensory issues.
   e. PE, whilst very good for many children with sensory issues is also very difficult for them and may lead to them attempting to with-draw.
   f. Art is a lovely activity, but can be very stressful for children who have motor control issues or who are visually or tactile defensive.

8. Ensure that you make opportunities available for friendships to flourish in the classroom, encourage paired working and or group working. Friendships develop in the classroom; the playground offers further opportunities to strengthen friendships but necessarily to foster them in the first instance.

9. The child is very likely to require extra supervision to stay on task.

10. Verbal instructions should be repeated. Ideally all instructions should be written so that they can be referenced as required. The use of symbols may be necessary if literacy levels are low.

11. Ensure the temperature is neither too hot nor too cold.

12. Ensure that the child is only required to write what is absolutely necessary, provide lesson notes rather than expect the child to copy from the board. Use alternative methods of recording, scribe/dictaphone/computer.

13. Allow sufficient breaks during the lesson to help refocus and to optimise learning opportunities.

14. Offer incentives to speed up a desirable behaviour. If you finish (a) then you can do (b). This give the child a goal to work towards, the work in itself may not have any intrinsic value for the child.

15. After an incident has occurred allow the child sufficient time to calm down. When the child appears to be calm allow the child the opportunity to undo/or redo a given behaviour. This helps the child to understand that it is possible to retrieve a situation. Opportunities should be given to help the child to understand why things went wrong on this occasion and strategies should be offered to show how to do it differently next time.

16. It may be useful to write a social story with the child. Social stories are mainly produced for children with autism but they can also be beneficial for other children. It is a simple method used to help a child understand what is expected of them in a given situation.

Jargon busting!

Sensory processing – a term to describe the fact that all eight senses take in information, decide whether to acknowledge it and take the information to the brain and then the brain decides whether a response is needed. It is happening all of the time in all of us.

Tactile – our sense of touch. Our skin and inside our mouths. This gives us all the information about our world and also keeps us safe by picking up temperature and pain.

Olfactory – our sense of smell, both for protection but also memories and communication.

Gustatory – our sense of taste, developed for protection and hard to separate from smell.

Visual – our eyes and what we can see. Helps us with our fine motor coordination, our balance and movement.

Proprioception – all of our muscles, joints and ligaments give information about what they are doing and how they are positioned at every moment in time. It gives us our body map and body awareness and allows us to move and do all our daily activities.

Vestibular – our internal gyroscope. This tells us which way is up, whether we are moving and how fast, it helps us keep our eyes steady on an object whilst we are walking or running, it helps us sit up and stand up against gravity. It is our movement detector and also our security provider by connecting us to gravity.

Interoception – Enables us to feel the inside of our bodies, to feel our inner sensations such as hunger, thirst, needing the toilet. Interoception awareness allows us to notice how we feel therefore it is directly connected to our emotions.

Sensory motor development – how we learn new skills and gain our co-ordination for play, school and life skills. Our senses feed our brain and motivate us to move, to explore and to learn.

Motor planning – the true definition means the brain having the concept or skills to come up with the idea about how to move the body to complete an activity, sometimes we confuse this with someone who can have the idea but their proprioception isn't effective so they are very un-coordinated.

Two-sided co-ordination – being able to use both sides of our body in a well coordinated manner, ie tie shoelaces, drive a car, use a knife and fork.

Central nervous system – our brain, spinal cord and all of our nerves that go throughout our bodies.

Fidget toys – an object that can be held in a pocket or hand and fiddled with or played with in order to allow the person to focus on someone talking, on the film being watched, on the conversation being had. It can be a way of keeping our alertness at an appropriate level so we can still attend and learn without having to fidget with our legs or body.

Further advice and support

SEND Support Services

Special Educational Needs Co-ordinators
May be able to support with the implementation of the strategies contained in this resource pack. Contact the SENCO for your school.

Children's Occupational Therapy service
The Children's OT service work with children who primary have physical health difficulties and provide occupational therapy assessment to establish their priority and strengths to provide advice or intervention to enable a young person to participate in everyday activities. The initial intervention where a child is suspected to have underlying sensory processing difficulties is frequently our parent workshops. Following a 12 week consolidation period, if parents still have questions or concerns they should see their GP for referral to a professional for further assessment of needs.

For parents
This service offers educational workshops around sensory processing and what we can do at home and out in the community to help meet your child's sensory needs. This is for parents only and is free of charge providing the referrer confirms the child has a significant difficulty in everyday tasks and not just behaviour.

For schools
The service will offer educational workshops for staff, to give a basic awareness of sensory processing and what you can do as a school to support your students with their sensory needs.

Sensory Integration Network (UK and Ireland)
Open to parents, educators, therapists and support workers.

Website: www.sensoryintegration.org.uk
Introduction to Sensory Integration (1 day)
Introduction to Sensory Processing (3 day)

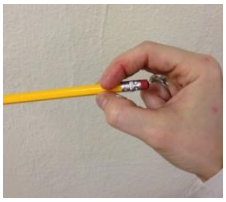
For further advice and information please email rgh-tr.childrenstherapyservices@nhs.net

10 Fine Motor Warm Ups Exercises For Handwriting Tasks

Fine motor warm up exercises is a good way to "wake up" the fingers and hand muscles for writing. It makes a fun transition into writing tasks. Below you will find some quick, easy exercises to do with your class.

PENCIL WALKS

Pencil walks are a simple fine motor activity that the whole class can do before starting a handwriting assignment. Using your dominant hand, hold eraser-end pencil as you would grasp it to write (using your thumb, index and middle fingers). Use only these three fingers to "walk" down the shaft of the pencil to the tip. Flip the pencil over, then "walk" back up to the eraser end. Be sure not to use your ring finger or pinkie, or other hand, to help! Have "walking" races between students, or time students to "break records" to motivate them.





THE PENCIL BATON

A quick follow up to "pencil walks" is the "pencil baton". Hold your pencil in the middle of the shaft with in your dominant hand using your thumb, index finger and middle finger. Using these three fingers, twirl the pencil like a baton. Perform between 10-20 reps.




PENNY TRANSLATION

"Translation" is ability to move an object that is in the palm of your hand, to your fingertips of the same hand, using just finger movements. Translation involves finger isolation and finger coordination skills, and so is a great warm up to handwriting. I like using a penny, but any small item will work – like a button, paperclip, bobby pin, pen cap, erasertop or marble. Motivate kids by timing how long it takes them to get the object to their fingertips, or who can move the smallest object the fastest.




PENNY SHUFFLE BOARD

Penny Shuffle Board is a quick follow up to Penny Translation. The activity is simple. Two people stand on either side of a desk or table. Using their thumb and index finger or middle finger, they must "flick" the penny

in order to make it slide to the other side of the table. Each player only gets 5 flicks. The goal is to get it as close to the edge as possible in those 5 flicks without going over the edge.



HAND PUSH AND PULL

Hand push and pull is an easy exercise that "wakes up" the hands and upper arms. Encourage the students to use their "strongest" muscles when pushing or pulling. You perform the "push" part of the exercise by putting your two hands together, pointing upwards, in front of your chest, with your elbows bend at a 90 degree angle. Push your two hands together as firmly as you can, and hold that "push" for 5-10 seconds. You perform the "pull" part of the exercise by holding your two hands together by hooking your fingers. Again, keep your elbows bend at a 90 degree angle and pull your two hands apart, without losing your grasp, as firmly as you can. Hold this "pull" for 5-10 seconds.


SPIDER PUSH UPS

Spider push-ups involve moving the fingers together in a coordinated way. Put one hand, palm up, on your desk. Place the other hand, palm down, on top of it. With your fingertips touching the "matching" fingertip of the other hand, bring the fingers together. Then bring the fingers back down to the original position. Perform exercise in reps of 10-20.






FINGER HOCKEY

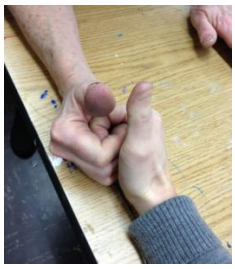
You already know how to play this game. Two players sit or stand on either side of a desk or table. Mark out a "goal" using masking tape on each side. Make a "puck" out of crumbled paper, a cotton ball, a small pom pom ball, a coin, etc. Using your thumb and index or middle finger, take turns shooting the "puck" into the goal.

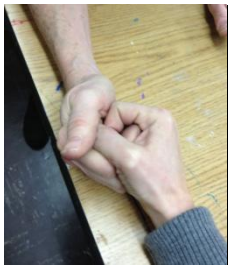

SPIN THE LID

This is an easy way to recycle your old lids - any size lids will work (tomato sauce jars, baby food jars, butter tub lids, coffee canister lids, etc.) Place your hand palm facing upward, holding the lid with your fingertips. Keeping your hand in this upward position, use your fingers to rotate the lid in a circle. Make the task entertaining by seeing who can "get to the…." marker first. This activity can easily be made into a fun and/or academic activity by placing "markers" on the lid. Using your thumb as the "pointer", have the students rotate the lid to a desired point. Use letters, numbers, colors, etc.


THUMB WAR

As long as your students can follow rules and accept defeat, a good old fashioned game of thumb war works on thumb isolation and strengthening. Make sure the student keeps their forearm and pinkie side of the hand ON the table.





THE FINAL COUNTDOWN

This is a nice exercise to finish the warm up with. Start SLOWLY counting 1 to 10, having the students count along by touching their thumb to each finger. Make sure that the student is touching only the designated finger without moving any of the other fingers. Then count backwards from 10 to 1. Now you're ready to write!




For further enquiries or support contact rgh-tr.childrenstherapyservices@nhs.net

This document uses information from *Sensory Processing for schools KS1-4 Sept 2015* (Leicestershire County Council, Rutland County Council, Leicestershire Parent Carer Forum and Leicestershire Partnership NHS Trust)