

DERBYSHIRE MULTI-AGENCY

# SENSORY PROCESSING NEEDS *TOOLKIT*



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# PURPOSE AND ACKNOWLEDGEMENTS

This Toolkit has been developed by a multi-agency team of professionals including specialist teachers (Early years, Autism and SEN specialists), Paediatric Occupational Therapists and Educational Psychology.

It is not an assessment or diagnostic tool; however, it draws on the experience and expertise of these professionals to enable schools/ settings to consider environmental factors and behaviours which may have a sensory basis.

The toolkit is a guide for schools/settings/practitioners on how to support children with sensory needs, in order to remove or reduce the impact of this on their learning.

It is intended to be used with individual children in a child-centred approach rather than groups of children such as whole classes.

It can be used across all educational, therapeutic and community settings and age groups e.g EYs, mainstream, special schools, colleges, swimming, cubs, Judo, dance, respite care etc

As part of the graduated approach to the Derbyshire Local Area approach to sensory processing needs there is an expectation that Step 1 is completed before practitioners continue with use of the Toolkit. This includes taking appropriate training. See flow chart on next page.

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# UNIVERSAL QUALITY FIRST TEACHING DERBYSHIRE LOCAL AREA POSITION STATEMENT SENSORY PROCESSING NEEDS CPD LEAFLET

## STEP 1 - TARGETED SENSORY SMART ENVIRONMENT (ASSESS)

### Step 1 documents

- My views
- Environmental audit
- Observation chart
- My day (Assess)

Attend CPD training on sensory processing needs

## STEP 2 - TARGETED MULTI-AGENCY SPN TOOLKIT

What you might see overview (Assess)

Refer to relevant sensory systems initial strategies and additional activities sheets (Plan)

Team around the CYP combine information collected in Step 1 with that from Step 2 to write a sensory plan (Plan)

Review the sensory plan and observation checklist at regular intervals alongside other educational plans in place (Review)

Deliver/provide strategies, activities and resources identified within sensory plan for an agreed period (Do)

## STEP 3 - SPECIALIST

Currently this involves referring to specialist children's services in order to gain further insight and support around more complex connections between sensory needs and SEMH, attachment, Autism, learning difficulties, eating and drinking, sleep etcetera

# WHAT IS SENSORY PROCESSING?

We use our eight senses, proprioception, interoception, tactile, vestibular, auditory, vision, smell and taste, in order to explore and make sense of our experiences and the world around us. Information from our senses is received by our brain which filters out all that is unnecessary and formulates a response to the information it receives.

Interoception, vestibular and proprioception are interoceptive sensory systems (meaning from within the body)

Vision, auditory, tactile, olfactory and gustatory are exteroceptive sensory systems (meaning from outside the body)

Children and young people (CYP) with sensory processing needs may have a difference in the way their brain receives and makes sense of the information that it gets from their senses.

Some CYP receive too much information from sensory experiences whilst others will not receive enough. They will have the same experiences as their peer group but perceive them quite differently.

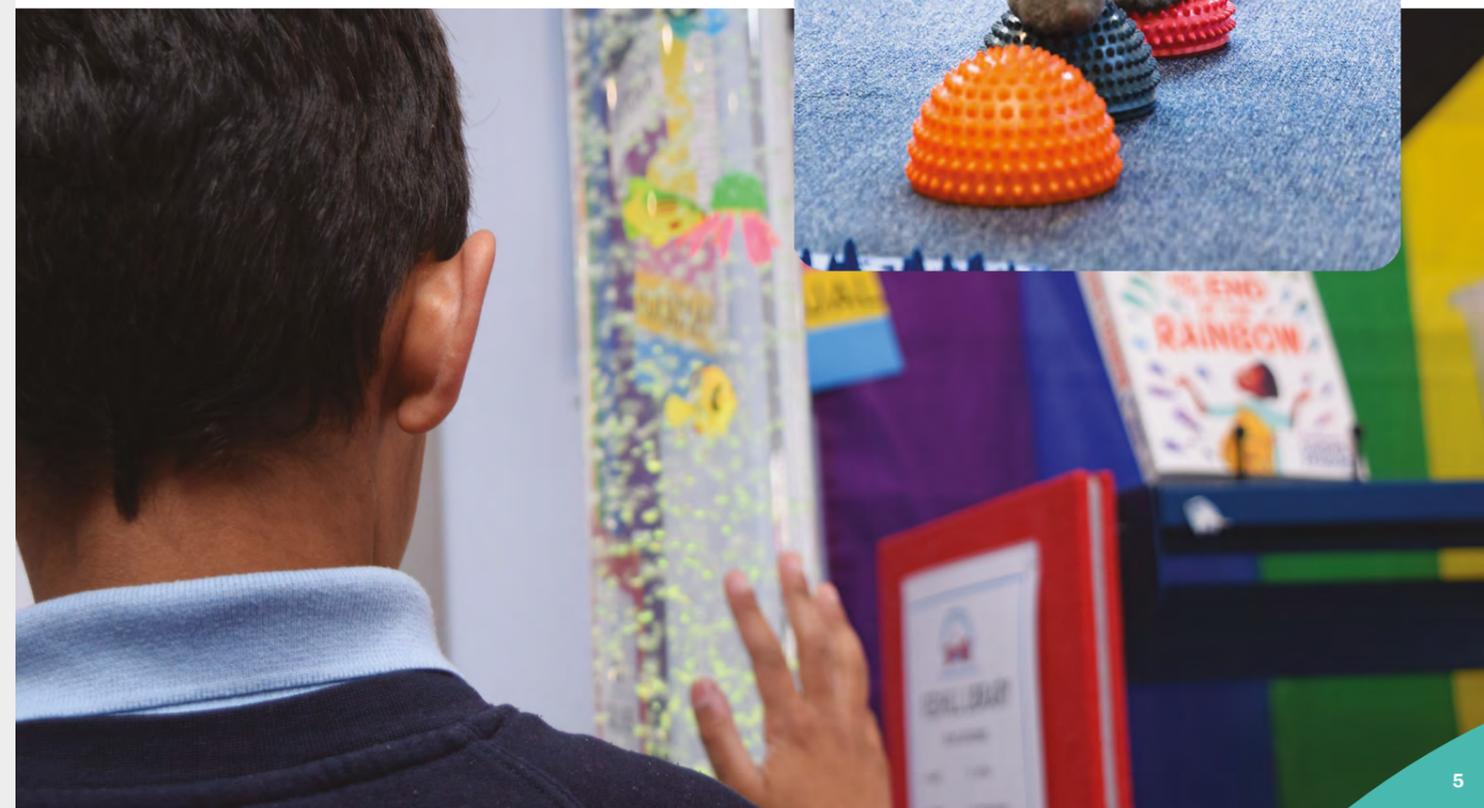
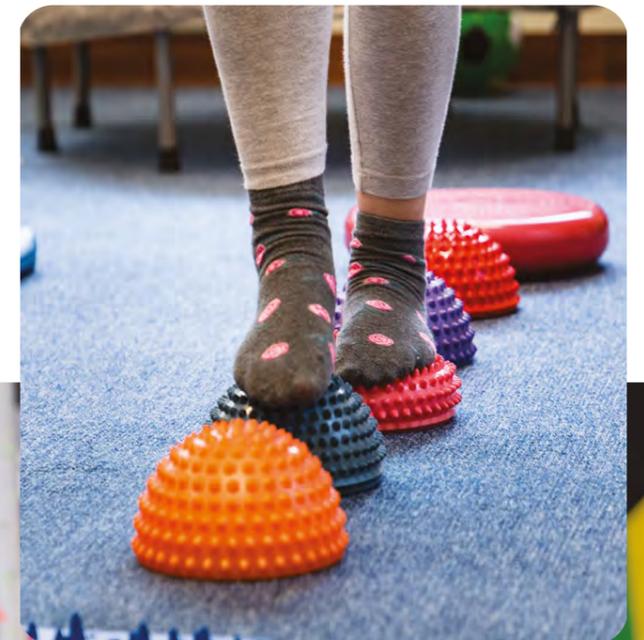
Research by the sensory processing disorder scientific research group found that 'one in six children experiences sensory challenge significant enough to have an impact on their ability to learn.' (*Sensory over-responsivity in elementary school: prevalence and social-emotional correlates. A Ben-Sasson, A.S Carter and M.J Briggs-Gowen 2009*)

Lucy Miller, Occupational Therapist and author suggests that up to 85% of children with neuro developmental disorders will have sensory processing difficulties. (*Sensational kids, Lucy Jane Miller 2006*)

There are children and young people who have sensory processing needs such as over responsive sense of smell, yet it does not present as a barrier to their learning and everyday functioning.

For others their sensory processing needs present as a significant barrier to their learning and everyday functioning.

**Derbyshire has carried out a review of current research and advice. A summary of this and the decisions behind the Local Area approach are provided in the Working with children and young people with sensory processing needs position statement.**



# WHEN TO USE THE DERBYSHIRE SENSORY PROCESSING NEEDS TOOLKIT?

As previously stated, there is an expectation that **phase 1 of the Derbyshire approach to sensory processing needs is completed before you continue with use of step 2 materials within the Toolkit. This includes taking appropriate training.**

CYP with sensory processing needs may take longer to learn new skills and routines which can impact on their learning. This can lead to high levels of anxiety which often impacts on behaviour, confidence and social skills.

A CYP's challenging behaviours and anxieties may have developed as a response to sensory needs. The Derbyshire Sensory Needs Toolkit aims to identify and address sensory processing needs.

Namely, **over responsiveness** (receiving too much information and therefore avoiding sensory stimulation), **under responsiveness** (passively unaware of sensory information not received) and **sensory seeking (under responsive** but actively seeking sensory stimulation).

These are broad terms that are not diagnostic in any way but help us to *describe children's behaviour and their responses that we see*. We must remember that children's behaviour and their response can change dependent on their stress levels, the environment they are in, their developmental levels and changes within their sensory systems.

A CYP can present as under-responsive or over-responsive dependent upon many factors.

Sometimes if we are stressed a busy space can be unbearable and if we are tired, we might use movement to keep ourselves awake. A CYP might have a phase of wanting to go upside down or wanting to move and jump but then grow out of this. This can be part of typical development it can also be a natural reaction to learning, stress and changes of/within environments.

The tactile system, for example, can display elements of over-responsive (defensive) reactions but also be under-responsive and seeking more input at other times.

When we have different sensory experiences, our brains store information for the next time. If it was not a positive experience our reaction might be defensive the next time. These reactions can be magnified in a CYP who has some underlying sensory processing needs or learning difficulties.

Do not try to define a CYP just by using an umbrella term, remember, you are going to react to what you see and offer activities that either feed or re-direct a sensory need.

# HOW TO USE THE DERBYSHIRE SENSORY PROCESSING NEEDS TOOLKIT

When identifying CYP's sensory needs it is important for the multi-agency team to spend time observing them in a range of environments and gaining information from all professionals and carers involved in order to be able to ascertain not only whether they are **over/under responsive** to which sensory systems but also why/when/for how long they are distracted/distressed/zoned out etc.

Sometimes it is difficult to work out what the triggers to certain behaviours are as they are not evident at the time, e.g., a change in family circumstances or they are not visible e.g., an unfamiliar smell. It is therefore really important to discuss and observe in great detail before making assumptions such as 'there are no triggers' or 'that behaviour has no function and happens randomly'.

The result of this holistic assessment would enable you to report that for example:

*Thomas requires a 2-minute multisensory activity involving tactile, vestibular and visual input every 15 minutes in order to remain engaged and ready to learn.*

*Peter needs to move in order to concentrate so sits on a wobble cushion or a hokki stool during lessons.*

*Sally becomes distressed during loud activities such as assembly. She requires a 3-minute calming proprioceptive activity ahead, tactile items throughout and a 5-minute calming proprioceptive activity afterwards.*

*On the days that Billy has spent the night at dad's he needs 15 minutes quiet time as he enters school before going into lessons.*

A CYP may present as being generally over-stimulated and in a constant state of high arousal (fight, flight or freeze). It may be difficult, at least initially, to pick out which senses are **over responsive** at which times.

It is vitally important that effort is spent adapting the environment, activities and expectations placed upon them by others.

This will hopefully reduce the levels of stimulation and stresses in turn reducing instances of sensory overload and or 'shut down'.

Therefore, when devising a plan to meet a CYP's sensory needs, those which are identified as **over responsive/defensive** should be addressed first and 'balancing' (calming) proprioceptive input provided to facilitate a reduction in overloading experiences.

The aim of a sensory plan should always be for the CYP to independently meet their own sensory needs where possible.

A positive result would be a CYP understanding their individual sensory needs, what resources/activities work for them and recognising when and how to access these in order to maintain sensory regulation.

This may initially rely upon adult facilitation, providing new/alternative experiences and resources and making adjustments to the environment/expectations.

For those with cognitive and or physical difficulties adult facilitation may be prolonged and having the tools to communicate their sensory needs should be prioritised.

Any sensory plan should be person centred and reviewed regularly using an 'assess, plan, do, review' model.

The Derbyshire Sensory Tool Kit will support both the identification of a CYP's individual sensory needs and addressing them using a graduated response through steps 1, 2 and 3.

**STEP 1**  
SENSORY SMART ENVIRONMENTS

**STEP 2**  
IDENTIFICATION OF SENSORY PROCESSING NEEDS

**STEP 3**  
SPECIALIST SUPPORT





# STEP 1

## SENSORY SMART ENVIRONMENTS

## WHY DO STEP 1?

Best practice involves initial consideration of the impact of the environment upon the individual CYP within it.

It is important to ensure that CYP have had hearing/ vision assessments to ensure that any difficulties are not associated with hearing/visual loss. A CYP may also have visual perception difficulties that may need investigating.

A number of CYP struggle to behave, interact and learn as they are expected to, due to their response to the environment and the expectations placed upon them by others. This may be sensory related.

The tools within Step 1 will enable practitioners to identify and support these difficulties. The strategies provided are not sensory processing specific however will support the needs of a range of CYP.

## THINK!

- **PERSON**  
What are the CYP's patterns in the day?  
When do they most need a calming option?
- **PLACE (ENVIRONMENT)**  
What is the environment like? Is this overloading, or just right for them?
- **ACTIVITY**  
What are you asking the CYP to do? Is this reaction to an activity that is too hard, or is not offering enough stimulation / has it gone on too long, or not long enough?

## WHAT YOU NEED TO DO AT STEP 1

1. Complete the **Environmental audit**
2. Complete the **Environmental audit for home**
3. Complete the **Observation chart**
4. Complete the **Incident log**
5. Support the CYP to complete the **'My views'** A or B dependent upon developmental level/ability
6. Develop a plan to address concerns raised and review the plan within 6-8 weeks

The environmental audit will facilitate the identification of what environmental factors are having an impact upon the CYPs ability to function whether that be at school, at home, at swimming club or scouts for example.

An environmental audit should be completed for each CYP experiencing sensory processing needs as their individual responses to their environment will differ. Best practice would be to complete each section in the appropriate setting e.g., dining hall with the CYP in view or in mind.

Not all areas of the sensory environment will be easily adjusted but many are very easily achieved. As with all good inclusive practice it is essential to remember that we should not be thinking about how a CYP can fit into the existing environment but how the environment can be adapted to meet their specific needs! Reasonable adjustments can make a significant difference to a large group of CYP with sensory processing needs!

The Observation chart will facilitate the identification of what is happening, when. Very often practitioners and parents report that behaviours occur for no reason 'out of the blue'.

Completing the observation charts will ensure that everyone has a much clearer understanding of what the challenges are and why they might be happening. The exemplars included are just that, you should adapt the charts to fit the CYPs day/session/environment etc.

The My views documents facilitate the collection of the CYPs own views about what their challenges are, how they feel in response to their sensory environment and what currently helps them to feel better/reduce the impact upon them/self-regulate.

Again, the exemplars should be adapted to fit the individual CYPs environment/day/level of understanding.

As with all practice within the SEND or Early Years sector it may be difficult to gain the CYPs views directly and practitioners/parents may need to use their knowledge of the CYP and their observational skills to make best guess assumptions about these.

The visual resources included are examples and again these can be adapted/swapped to best meet the preferences, abilities and ages of the CYP involved.

## WHEN YOU NEED TO MOVE TO STEP 2

If initial strategies have not made adequate impact the 'team around the CYP' might decide to alter the plan and review in another 6-8 weeks.

Alternatively, they might decide that there is enough evidence that further intervention is required and move on to Step 2





## WHY DO STEP 2?

If following Step 1 strategies a CYP appears to have sensory processing needs which are presenting as a barrier to their learning, is preventing them from engaging with others or from functioning within their environment the 'team around the CYP' will complete Step 2 in order to raise awareness of their individual sensory needs. The initial strategies would be implemented as it was felt appropriate across the settings (home, school, community activities etc.)

Patterns of behaviour that require sensory based intervention will have been identified in response to what you see and what the CYP is able to tell you.

For some with low level sensory needs this process of raising awareness, making adaptations to the environment and strategies used will be adequate provision (reasonable adjustments made) to improve their outcomes.

The Step 2 toolkit documents are not designed to be read cover to cover. They are a collection of materials and resources to be used as identified as appropriate through the graduated response.

If following Step 1 it is felt that a CYP's sensory needs require further investigation practitioners are advised to take what they already know from Step 1 work and refer to the 'what you might see' documents that provide some of the most common types of presentation (although by no means definitive) as a starting point to identifying which sensory systems are presenting as barriers to them learning, engaging and functioning.

There may be one obvious sensory system that is a priority to be addressed, however each CYP's sensory needs require a holistic overview and if several sensory systems are identified they must be considered within the context of each other, the barrier they present and the environment.

# STEP 2

## IDENTIFICATION OF SENSORY PROCESSING NEEDS



## WHAT YOU NEED TO DO AT STEP 2

1. Complete the *identification of sensory processing needs tool* within a 'team around the CYP' approach. The '**what you might see**' table should be used as initial guide to which sensory systems the CYP might have needs within. Practitioners would then move on to the appropriate sensory elements of the identification tool for more in-depth understanding of the individual's sensory needs.
2. Implement strategies identified from the '*Initial strategies*' lists for identified sensory systems provided as deemed appropriate
3. Complete the **my sensory plan** which sets out who will do what, when in order to address individual sensory processing needs and include this plan within the CYP's My SEND learning program
4. Review the **observational chart** in order to ascertain what the impact of the strategies/adaptations has been
5. Practitioners should be able to access 'sensory champions' from the relevant DCC specialist support services
6. In the event that time/resources required are outside of the school/ settings normally available resources this could be included within an application for Early Years SEN Inclusion fund/GRIP/TAPS/EHCP/Health personal budget/SC personal budget funding request
7. Professionals and parents would be advised at this point to access further training, resources and or reading materials identified within the **recommended resources and interventions** element of the Toolkit.

## THE EIGHT SENSORY SYSTEMS

Proprioception

Vision

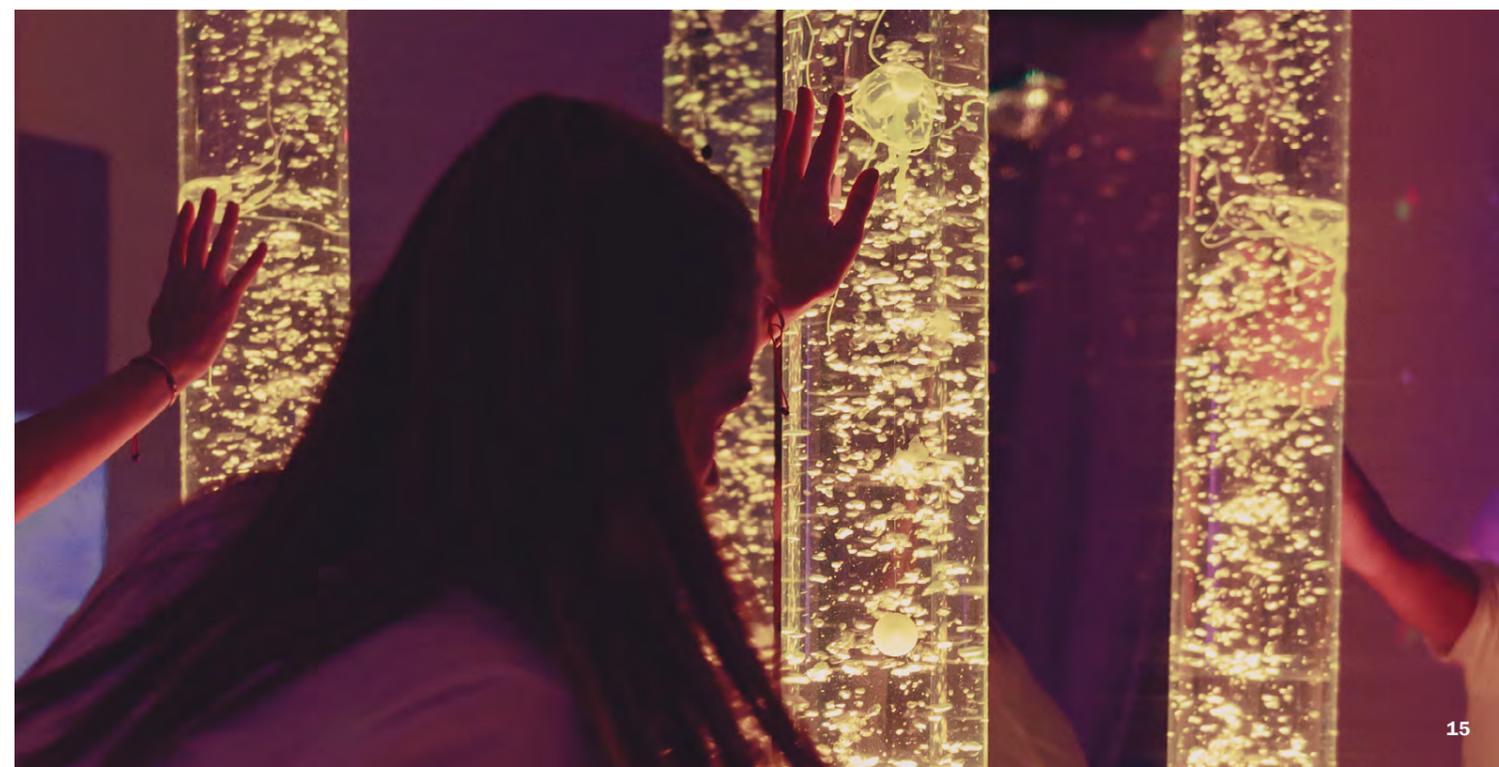
Interoception

Hearing

Vestibular

Smell and Taste

Tactile



# STEP 3

## SPECIALIST SUPPORT

### WHY DO STEP 3?

Intervention and support offered by existing services available to the CYP over a period of time have not had the desired impact upon reducing barriers to learning and functioning.

There will be a small number of CYP who, following a period of person-centred intervention, will continue to experience complex sensory needs.

### WHAT DO YOU NEED TO DO AT STEP 3?

Contact specialist children service (e.g. Educational Psychology, Autism Outreach, Behaviour Support Service, SSEN, EYSEN) and discuss with a “sensory champion”. It may be helpful to call together a multi-disciplinary team meeting with parents/carers to identify and agree next step such as referrals to appropriate specialist children’s services.



# APPENDIX 1

## WORKING WITH CHILDREN AND YOUNG PEOPLE WITH SENSORY PROCESSING NEEDS – DERBYSHIRE LOCAL AREA POSITION STATEMENT

**This position paper draws upon a comprehensive review of the research evidence and represents the views of Education, Health and Social Care providers and commissioners within the Derbyshire Local Area. It is aimed at practitioners supporting children and young people who are experiencing difficulties in managing their sensory processing needs and its purpose is to improve consistency of approach amongst professionals and reduce the uncertainty for families.**

This position paper consists of:

1. Derbyshire Local Area's position in relation to the use of the term Sensory Processing Difficulties and Sensory Integration Therapy.
2. A description of the multi-agency approach developed by specialists across Health, Education and Social care in conjunction with parents aimed at identifying and supporting children and young people who are experiencing sensory processing needs.

### SENSORY PROCESSING

The human brain receives information from all our senses – vision, hearing, taste, smell, touch, vestibular (responsible for our sense of balance and movement) proprioception (responsible for our body map and spatial awareness) and interoception (responsible for our internal state) – and once this information is processed it will formulate a response. Difficulties in processing and formulating a response to information from all our senses may result in being too sensitive to some stimuli and not sensitive enough to other.

These sensitivities are, for instance, often linked with 'disruptive' behaviours and the behavioural difficulties seen in children with Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Attachment Disorder, Cerebral Palsy and developmental coordination disorders.

Although Miller et al (2007) propose the term Sensory Processing Disorder to describe such dysfunction this has not been accepted or added as a new diagnosis in the latest edition of the Diagnostic and Statistical Manual-5th Version (the guide used by psychiatrists and many other clinicians including paediatricians, psychologists, and social workers). Furthermore, the American Academy of Paediatrics (2012) recommends that the term Sensory Processing Disorder should not be given as a diagnosis and that consideration should be given to other behavioural/ developmental disorders.

Also highlighted by the American Academy of Paediatrics (2012) is recognition of the limited data on the use of sensory-based therapies. Inconsistent and inconclusive evidence continues to limit our understanding of the nature of sensory processing difficulties and the most effective therapeutic practices to lessen it (Ben- Sasson, 2009; Foss-Feig et al, 2012).

### SUPPORTING SENSORY PROCESSING NEEDS

A number of different approaches can be used to support sensory processing (i.e. environmental support and modifications, sensory strategies and sensory based interventions) and the council for disabled children has produced an information sheet explaining sensory differences and approaches to intervention which the reader may find helpful. See here .

Sensory Integration Therapy (SIT) is a trademarked intervention that aims to change a child's sensory processing through direct, intensive input. In order to deliver SIT a practitioner is required to have completed the SIT trademarked training. Although it has a high profile, SIT has a limited evidence base for change and the Royal College of Occupational Therapists report that due to such inconclusive evidence, Sensory Integration Therapy (SIT) "may not be considered justifiable and cost-effective" (College of Occupational Therapists, 2015, p.7).

Research looking specifically into the use of Sensory Integration Therapy with individuals with ASD has concluded that although some studies have found positive results, others have found limited or no results, and consequently, one "cannot determine if sensory integrative therapy provides any benefits to individuals" with ASD. *Quote from historic site 'researchautism.net'*.

A review of current available evidence by Derby & Derbyshire Public Health (2019) concluded that there was insufficient evidence to support the commissioning of this approach (see attached CCG commissioning guidance) Derby and Derbyshire CCG (DDCCG) has deemed that there was "insufficient evidence to suggest that (SIT) is a clinically effective intervention" (Clinical and Commissioning Group, 2019, p.3).

The Royal College of Occupational Therapy's Informed View paper 'Sensory Integration and sensory-based interventions' (2021) also clearly states that:

*Some occupational therapists may choose to undertake additional training in sensory interventions. The Health and Care Professions Council (HCPC, the regulator of occupational therapists in the UK) requires occupational therapists to 'practise safely and effectively within their scope of practice' and 'draw on appropriate knowledge and skills to inform practice' (HCPC 2013) but it does not specify that a particular type or level of qualification in sensory interventions, for example Ayres Sensory Integration® is expected of occupational therapists.*

In response to the above, multi-agency partners across Derby & Derbyshire Local Area have access to a variety of training, support and other Continuing Professional Development opportunities to enable them to deliver environmental support and modifications, sensory strategies and sensory based interventions.

### DERBYSHIRE LOCAL AREA POSITION

Although it is accepted that there may be differences in professional viewpoints; Derbyshire Local Area recognises the evidence above and will therefore not use the diagnosis/ label of Sensory Processing Disorder or embrace SIT. In continuing to follow an evidence-based approach, Derbyshire Local Area will however remain mindful of ongoing research in this field. And although it is accepted that terminology is interchangeable; for clarity/ consistency purposes, Derbyshire Local Authority will use the term 'sensory plan' as opposed to 'sensory diet'.

Derbyshire Local Area does acknowledge that sensory processing needs (difficulties in processing and formulating a response to sensory information) can impact upon the daily lives of children and young people; and may present, to varying degrees,

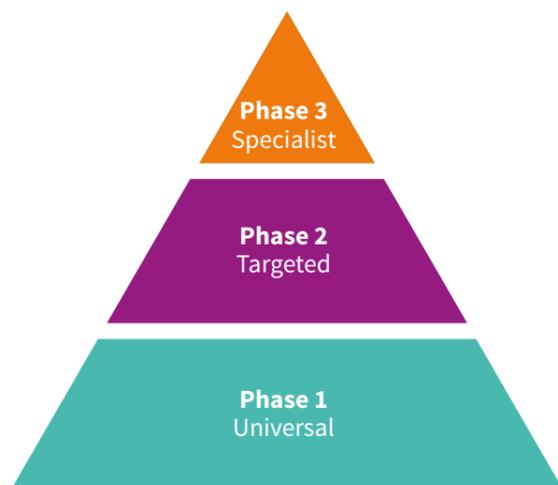
as a barrier to the development of independent daily living skills, building of positive relationships, emotional well-being and learning. Derbyshire Local Area will therefore endeavour to work with practitioners and families in identifying and supporting children and young people with sensory processing needs. This approach will be achieved via an integrated model and graduated package of support at three key phases, as outlined in Appendix One overleaf.

This document to be approved by the Derbyshire SEND Strategic Board and will be reviewed at regular intervals.

### References

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- Miller, L.J., Schoen, S.A., James, K., & Schaaf, R.C. (2007). *Lessons learned: a pilot study on occupational therapy effectiveness for children with sensory modulation disorder*, *American Journal of Occupational Therapy*, 61, 161–169.
- American Academy of Paediatrics (2012). *Policy Statement – Sensory Integration Therapies for Children With Developmental and Behavioural Disorders*, *Pediatrics*, 129(6), 1186–1189.
- Royal College of Occupational Therapy (2021) *Informed View paper 'Sensory Integration and sensory-based interventions'*. Available at <https://www.rcot.co.uk/about-occupational-therapy/rcot-informed-views>

## APPENDIX ONE: IDENTIFYING AND SUPPORTING CHILDREN AND YOUNG PEOPLE WHO ARE EXPERIENCING SENSORY PROCESSING NEEDS.



### PHASE 1

Children/ young people who present with sensory processing needs will initially be supported by front line practitioners who will have awareness of sensory processing needs and of the Derbyshire Sensory Processing Needs Toolkit. Front line practitioners and parents/ carers will work together to identify and address these needs at home, in the classroom and in the wider community. Key actions at Phase 1 include:

1. Complete the Environmental audit
2. Complete the Observation chart
3. Support the CYP to complete the 'My views' A or B dependent upon developmental level
4. Develop a sensory plan with parents/ carers to address concerns raised and review the plan within 6-8 weeks

### PHASE 2

Children/ young people who continue to experience sensory needs will be supported by workforce practitioners who will have access to additional input from 'sensory champions' within Education, Health and Social Care Services (as appropriate/ relevant). Level of involvement will be based on each services' own specific service criteria and service level agreements. As in Phase 1 the assessment tools and strategies from the Derbyshire Sensory Processing Needs Toolkit will be used. Key actions at Phase 2 include:

1. Complete the identification of sensory processing needs tool within a 'team around the CYP' approach. The 'what you might see' table could be used as initial guide to which sensory systems the CYP might have needs within. Practitioners would then move on to the appropriate sensory elements of the identification tool for more in-depth understanding of the individual's sensory needs.

2. Implement strategies identified from the Initial strategies' lists provided as deemed appropriate.
3. Complete the My Sensory Needs Plan which sets out who will do what, when in order to address individual sensory processing needs and include this plan within the CYP's My SEND learning program.
4. Review the observational chart in order to ascertain what the impact of the strategies/adaptations has been.
5. Practitioners should be able to access 'sensory champions' from the relevant DCC specialist support services.
6. In the event that time/resources required are outside of the school/settings normally available resources this could be included within an application for Early Years SEN Inclusion fund/ Inclusion Panel Funding/EHCP/Health personal budget/SC personal budget funding request.
7. Professionals and parents are advised at this point to access further training, resources and or reading materials identified within the recommended resources and interventions element of the Toolkit.

### PHASE 3

Children/ young people with significant sensory needs whose outcomes have not been adequately improved through the support of Phase 1 and Phase 2 interventions will be supported by practitioners who have received a higher/ more specialist level of training in sensory processing needs (e.g. Specialist Teachers/ Education Practitioners, Educational Psychologists, SENCOs with experience and CPD commensurate to a specialist teacher). Key actions at Phase 3 include:

1. Individual observation, assessment by a specialist practitioner.
2. A review of the actions and impact at phase 1 and phase 2 by a specialist practitioner.
3. Advice and recommendations by a specialist practitioner.
4. Monitoring/ recording to evidence progress and impact by the school/ setting

Although it is expected that most children's/ young people's needs will be met through the above graduated response it is acknowledge there will be a small group of children's whose needs are so significant that they need highly specialised support from the onset, and will therefore enter access support at Phase 3.

# APPENDIX 2

## AN INTRODUCTION TO DERBYSHIRE LOCAL AREA APPROACH TO SENSORY PROCESSING NEEDS

**As children we are taught about our 5 senses, but we actually have 8 major sensory systems.**

We use our senses: proprioception, interoception, vestibular, tactile, auditory, vision, smell and taste, in order to explore and make sense of our experiences and the world around us. Information from our senses is received by our brain which filters out all that is unnecessary and formulates a response to the information it receives. Research has found that 'one in six children experiences sensory challenge significant enough to have an impact on their ability to learn.'\*

Children and Young People (CYP) with sensory processing needs may have a difference in the way their brain receives and makes sense of the information that it gets from their senses.

Some CYP receive too much information from sensory experiences whilst others will not receive enough. They will have the same experiences as their peer group but perceive them quite differently.

Sensory processing needs (difficulties in processing and formulating a response to sensory information) can impact upon the daily lives of CYP; and may present, to varying degrees, as a barrier to the development of independent daily living skills, building of positive relationships, emotional well-being and learning. The Derbyshire multi-professional approach to Sensory Processing Needs, endeavours to inform professionals, practitioners and families and support children and young people with sensory processing needs, in different environments.

### VOCABULARY

#### PROPRIOCEPTION

This sense carries information from the muscles and joints to the brain. This information tells the brain where the body is in space so that we store an accurate body map. This sense also tells us also how much we need to move and how much pressure we need to apply to complete tasks.

#### INTEROCEPTION

Interoceptive awareness is the ability to feel what is happening inside our body. It is recognising hunger, needing to use the bathroom, changes in temperature, blood sugar levels, heart rate, swallow, breathing rate and emotions for example and knowing what to do about it.

#### VESTIBULAR

This sense is responsible for detecting movement through space and the position of your head. It controls balance, tells you if you are moving, how fast you are moving and in what direction.

#### TACTILE

This is our sense of touch.

#### AUDITORY

This is our sense of hearing.

#### VISION, SMELL AND TASTE

These complete our eight senses.

#### OVER-RESPONSIVENESS

Receiving too much information and therefore avoiding sensory stimulation

#### UNDER-RESPONSIVENESS

Passively unaware of sensory information not received

#### SENSORY SEEKING

Under responsive but actively seeking sensory stimulation.

#### ENVIRONMENTAL AUDIT

Is the first step in identifying what factors are having an impact on the CYP's ability to access all aspects of life and learning. Derbyshire value the views of the CYP and their parents and carers when addressing Sensory Processing Needs and aim to work together to create better outcomes for the children and young people of Derbyshire.

*\*Sensory Over-Responsivity in Elementary School: Prevalence and Social-Emotional Correlates. A Ben-Sassoon, AS Carter, MJ Briggs-Gowen 2009)*

Derbyshire local area has created a Multi-Agency Sensory Processing Needs Toolkit which will give you a greater understanding of how CYP may be processing the sensory information around them and how to support them in school and Early Years settings.

If you are considering using the Derbyshire Sensory Processing Needs Toolkit you should be familiar with:

- the Derbyshire Local Offer,
- the Derbyshire Position Statement on Sensory Processing Needs
- the contents of this leaflet.

It is recommended that professionals should complete basic Sensory Processing Needs training as available through DCC Support Services.

# APPENDIX 3

## PRAXIS

**Praxis definition: “Praxis is the neurological process by which cognition directs motor action (Ayres, 1985).**

It involves **planning what to do and how to do it.** In order to know what to do we must first conceive the idea of what to do (ideation), then plan how we are going to do it (motor organization or motor planning), perform the movement correctly (execution) and then be able to reflect on feedback so we can adapt our movements in the future (feedback and adapt).

Movement is a combination of planning what action is required, preparing muscles to work effectively with other senses and co-ordinating the movement. All movement skills require refinement and practice in order to gain effective, fluent and automatic control, as part of this process we gain feedback from our bodies when we have done an action, and this helps us to refine and change our plan for the next time we do the movement.

Praxis involves the combination of the proprioception, vestibular and tactile senses working together in a coordinated manner.

Note: CYP who experience difficulties with praxis can present as emotionally labile, with poor self-esteem, who like routine and familiar activities and become stressed and anxious if the routines are changed or not completed.

This can superficially present as ridged behaviour and/or sensory processing difficulties. With graded step-by-step practice opportunities skills will improve.

Additional therapy programmes that can be used in schools are:

- Physical Literacy Programme
- Active Hands are Achieving Hands

What you see	Initial activities	How long for	What to be aware of!
CYP is unable to initiate movement	Break the activity down Practice the last part of the task until CYP can do this and progress backwards until the CYP is doing every part of the task. (backward chaining)	Short focused practice is best. 5 – 10 minutes a day 5 times a week is better than 30 minutes once a week	Be aware if the CYP has a brain injury/ physical disability which may impact on their skills acquisition they may still need to practice in the same way but may become fatigued quickly and will not be able to improve with prolonged practice. This CYP might have ‘good days’ and ‘bad days’
CYP is unable to fasten/unfasten buttons	Threading activities Push/pull activity Make sure button and fabric are clearly different colours (visual perception) Start with big buttons and large buttonhole Backwards chain the task Use a pencil case or activity bag with a button on it	5-10 minutes practice with 1:1 adult support daily	If the CYP has a disability to their hands, consider using aids such as a button hook to assist in this process

What you see	Initial activities	How long for	What to be aware of!
Pencil grip is immature	Theraputty activity, pinch putty to make a dragon back Hide small objects inside putty to encourage pinch/pincer grip and tripod grip Consider using a pencil grip Follow Active Hands are Achieving Hands programme. (to be circulated to schools)	Do for a minimum of 6 weeks 3-5 times a week for 10 minutes	
CYP is clumsy and bumps into things	Prepare by doing some big movements with lots of feedback e.g. Jumping 5 times on the spot or marching like a heavy giant Physical Literacy activities (Activ8 type activities) Ask the CYP to push open doors and hold them whilst others walk through	Immediately before an activity that the CYP finds difficult Make sure the CYP does the preparation slowly in a planned and deliberate manner	If the CYP has a diagnosis of brain damage or visual perceptual difficulties If the CYP has visual impairment. If the CYP has a physical disability. See therapy reports and recommendations
CYP does not see objects or others on the floor and walks through them	Plan movement before starting Move slowly Use social stories Practice following a trail Plan obstacle courses Find items hidden underneath other items to support spatial awareness	As routine preparation to activities. May need 1:1 support to do this	If CYP does not seem to ‘see’ part of a page or looks at objects people with their head at an unusual angle. Check last time child had an eye test Suggest parents request a referral to Occupational Therapy



### BACKWARD CHAINING

In order for CYP to develop new skills they need to practice the skill. In using the backward chaining strategy, we can promote continued practice for those who are finding certain motor tasks difficult.

When backward chaining an action, the skill needs to be broken down into small component parts and an adult should ensure that the CYP gains a sense of achievement by **completing the skill successfully**.

**Example:** task - to cut out a marked square within a piece of paper;

The adult might cut 3 sides of the square out before asking the CYP to start the activity then give the paper to them. Hold the page hand over hand, in order to help steer the paper and also support hand over hand on the scissors to guide the cutting action. In this way the adult can support the CYP to cut more of the square out...the adult should then withdraw their hand over hand on the scissors before the very last cut and allow the CYP to cut the final snip and succeed in cutting the square out of the page. Praise the CYP for their success.

Once the CYP can do this step consistently the adult can slowly wean the support backwards from the end point of the task: in this case, allowing them to cut the last 3 snips to achieve the goal, etc. until they can complete the whole task. This method can be applied to any skill. It is an effective strategy to maintain the CYP's engagement with the practice phase of acquiring a new and difficult skill. Effectively the CYP masters the skill from the end point backwards to the start point.

### FATIGUE

It is important to note that that the CYP will fatigue more quickly when learning and practicing a new unfamiliar skill or when they are not able to retain the skill from one practice session to the next in order to generalise the skill. The CYP is using a lot of mental and physical energy to focus and pay attention in order to try to acquire the skill. In this scenario there is an element of 'fading returns' where over emphasis on the practice of the task will not gain more success as the CYP has reached a point of saturation and fatigue. Repeated failure at a skill will result in reduced self-esteem and expectations of failure that can quickly become self-fulfilling.

It is often more beneficial to practice new skills in a regular (daily) short sharp burst of 5-10 minutes than a prolonged effort for 30 minutes once a week. Additional strategies of how to differentiate the task so the CYP can continue to do an activity on topic (but within their capability) with peers may need to be made.

### REFER

If a CYP has completed the Physical Literacy Programme for a minimum of one term and the Active Hands are Achieving Hands Programme for two terms but continue to demonstrate praxis and organisational problems they may benefit from a referral to OT/PT for more formal assessments of their co-ordination .

# APPENDIX 4



## RECOMMENDATIONS FOR THE USE OF EAR DEFENDERS

### Young children typically have more sensitive hearing than adults.

Ear defenders can be used to mask environmental sounds. They are recommended for use for young children exposed to loud sounds, e.g. at an air show, or festival where there is loud noise or music. They are also used to support CYP who become stressed, frightened or freeze when they encounter a loud, unexpected sound.

Ear defenders are widely available from the internet and should cost between

£10.00 - £20.00.

To ensure that ear defenders are not overused and become a tool by which CYP can live apart from their environment in a sound 'bubble', some basic recommendations are made below:

- Limit wear, to critical events such as the talking journey to/from school, going into the school dining room or assembly, being near a busy road, going into a public toilet where there are hand driers, or when the vacuum cleaner/food mixer is used. (see desensitisation)
- Wear for 5 minutes and see if the CYP can tolerate their removal. If not allow another 5 minutes

- When taken off place the ear defenders where the CYP can reach them and put them on if they need them. Easy access to the ear defenders will reduce anxiety that the CYP might experience about possible trigger events, and enable them to have control over their auditory/hearing environment; however, it is important that CYP are exposed to challenging sounds in a way that enables them to learn how to cope with the sounds when not wearing the ear defenders

### DESENSITISATION

Preparation using calming techniques (tactile and proprioceptive) should always be used. See 'sensory balancing' activities within the proprioception sheet as reference.

In order to desensitise to sounds that cause distress or a defensive response, CYP need to experience the sound in a safe way. The most effective way of desensitising is to record the sound and introduce it to the CYP at a very low volume.

This can be as part of a game, identifying noises, playing sound snap (having pictures of noise events and matching the picture to the sound) or as part of a social story (see links listed overleaf).

Once the CYP is happy with the sound at this very low level, increase the sound slowly, it often works to give the CYP the control of this process. It is VERY important not to rush this process as this could increase the anxiety for the CYP.



**IF** during the desensitisation process the CYP becomes fearful or demonstrates that the noise is becoming more impactful; go back one or two stages in the plan and allow the CYP to recover confidence before moving on again.

**Some** CYP will need to desensitise to the impact of the sensation of wearing the ear defenders. Again, tactile and proprioceptive preparation can be used effectively to enable to CYP to cope with the impact of the feel of the headphones/ear defenders. Gradually introduce deep pressure touch to the ear area using hands in a firm (non-tickling manner), hold this touch briefly and slowly increase the time thus desensitising the CYP to this sensation.

**DO NOT** squash the ears. Use social stories to support this process if required.

*Note:* For older CYP it is possible to use personal music players, with small or large earphones instead of ear defenders to support the CYP when in challenging auditory/sound environments. It is important to protect the CYP's ears if listening to music through headphones. The volume should always be low, as a rule of thumb, if the CYP is listening to music through their headphones an adult should not be able to hear the music at a volume that would enable them to identify the track playing when sitting beside the CYP, if you can hear the music it is TOO LOUD! Adults must monitor this to ensure that the volume does not creep up! It is possible with many earphones and music players to limit the volume in the settings.

It is recommended that CYP only listen to music through headphones for short periods of time, see above recommendations for ear defenders. Ideally a CYP will only listen to music at low volume, for a maximum of 30 minutes at a time.

#### THINK! SAFETY

Please ensure that your CYP is safe to leave with ear defenders or personal stereos before leaving them unsupervised with these items. Headphones are often connected to the personal stereo/MP3 player etc via a cable; safe use of this must be assessed before parents leave their CYP with these items.

If there is any doubt do not allow your CYP to use these items without being supervised by yourself or another responsible adult.

#### SCHOOLS THINK!

According to Bromley, Hare, Davison and Emerson (2004), 70% of CYP who have an Autistic Spectrum Disorder (ASD) are hyper-sensitive to auditory stimuli. Dickie, Baranet, Shultz, Watson and McComish (2009), found that for this population, common triggers for extreme responses to auditory stimuli included fire alarms. Schools should consider planning fire alarm tests when these CYP are NOT close to alarms e.g. in the classroom or moving along corridors but are outside on the playing field or playground. If the CYP wears ear defenders/headphones, ensure that they will be wearing them at the time of the fire alarm test/drill. This simple strategy will enable the CYP to experience the fire alarm test/drill without causing undue distress that will impact upon the CYP for the rest of the school day. Experience shows that once a CYP with ASD has been distressed by the experience of the fire alarm test/drill this can become a repetitive anxiety that impacts on the CYP daily for a long period of time. This will then influence the CYP's ability to focus and attend to lessons.

#### References:

*Ikuta, N., Iwanaga, R., Tokunaga, A., Nakane, H., Tanaka, K., Tanaka, G. (2016) Effectiveness of earmuffs and noise-cancelling headphones for coping with hyper-reactivity to auditory stimuli in children with autistic spectrum disorder: a preliminary study. Hong Kong Journal of Occupational Therapy 28, 24-32.*

*Bromley, J., Hare, D.J., Davison, K., & Emerson, E., (2004). Mothers supporting children with Autistic Spectrum disorders. Autism, 8, 409-423.*

*Dickie, V.A., Baranek, G.T., Schulttz, B., Watson, L. R., & McComish, C. S. (2009). Parent reports of sensory experiences of preschool children with and without autism: a qualitative study. American Journal of Occupational Therapy, 63, 172-181.*

# APPENDIX 5

## RECOMMENDED ADDITIONAL RESOURCES AND INTERVENTIONS

### BOOKS

- The Kid's Guide to Staying Awesome and in Control (Simple stuff to help children regulate their emotions and senses) – Lauren Brukner
- Colour My Senses – The Sensory Detective Colouring Book) – Paula Aquilla
- My Sensory Book: Working together to explore sensory issues and the big feelings they can cause: A workbook for parents, professionals and children – Lauren Kerstein
- Fuzzy Buzzy Groups for children with developmental and sensory processing difficulties: A step-by-step resource – Fiona Brownlee and Lindsay Munro
- Sensory Circuits: A sensory motor skills programme for children – Jane Horwood
- The Out of sync child - Carol Kranowitz
- The Out of sync Child Has Fun: Activities for kids with sensory processing disorder – Carol Kranowitz
- The out of sync child grows up – Carol Kranowitz
- Is It Sensory Or Is It Behaviour? Behaviour Problem Identification, Assessment, and Intervention – Carolyn Murray-Slutsky
- Understanding sensory dysfunction – Polly Godwin Emmons and Liz McKendry Anderson
- 50 games for sensory perception – Erkert
- Sensory integration – F A Davis
- Calm kids – Lorrain E Murray
- Building bridges through sensory integration – Yack, Aquilla and Sutton
- Sensory processing disorder answer book – Delaney
- Helping hyperactive kids – Horowitz and Rost
- 101 games and activities for children with autism, aspergers and sensory processing disorders – Tara Delaney
- Answers to questions teachers ask about sensory integration – jane koomar, Carol Kranowitz, Stacey Szklut, Lynn Balzer-Martin
- 1001 great ideas for teaching & raising children with autism and aspergers – Ellen Notbohn, Veronica Zysk
- Too loud, too bright, too fast, too tight – Sharon Heller
- Sensational kids – Lucy Jane Miller
- Sensory processing 101 – Dayna Abraham, Claire Hefforn, Pamela Braley and Lauren Drobnjak
- Interoception The eight sensory system – Kelly Mahler
- Interoception How I feel inside out – Cara N Koscinski
- Interoception: How I Feel: Sensing My World from the Inside Out by Cara N. Koscinski

- Interoception: The Eighth Sensory System by Kelly Mahler
- Listening to My Body: A guide to helping kids understand the connection between their sensations (what the heck are those?) and feelings so that they can get better at figuring out what they need. by Gabi Garcia; Ying Hui Tan
- The Zones of Regulation Paperback by Leah Kuypers
- The Colour Monster Paperback by Anna Llenas
- My Body Sends a Signal: Helping Kids Recognize Emotions and Express Feelings
- by Natalia Maguire; Anastasia Zababashkina
- The Incredible 5-Point Scale: The Significantly Improved and Expanded Second Edition: Assisting Students in Understanding Social Interactions and Controlling Their Emotional Responses by Kari Dunn Buron; Mitzi Curtis

### WEBSITES

- <https://www.kelly-mahler.com>
- <https://www.education.sa.gov.au/sites/default/files/ready-to-learn-interoception-kit.pdf>

### PROGAMMES/STRATEGIES

- Sensology waking up the senses - Flo Longhorn
- Mindful kids: 50 mindfulness activities cards – Whitney Stewart
- Mindful games activity cards – Susan Kaiser Greenland
- Challenge me! Mobility activity cards – Amanda Elliott, David Kemp
- Yoga Pretzels
- Sensory circuits
- Active Hands are Achieving Hands Devised and written by Janet Taylor Paediatric Occupational Therapist: Provided by the Derbyshire Healthcare NHS Foundation Trust.
- The Alert Programme: Williams, M,S & Shellenberger, S (1992) An Introduction to "How Does your Engine Run?" "The Alert Program for Self-regulation [Booklet] Albuquerque, NM, Therapy works Inc.
- Stickman Communications Limited, admin@stickmancommunications.co.uk 0044 (0) 7932548414 Penrose House, 67 Hightown Road, Banbury, Oxfordshire OX16 9BE
- 5 steps to managing big emotions
- Calm down brain break breathing
- Calm down with take 5 breathing



# APPENDIX 6

## THE ROLE OF SENSORY CHAMPIONS WITHIN THE DERBYSHIRE LOCAL AREA APPROACH TO SUPPORTING CHILDREN WITH SENSORY PROCESSING NEEDS (SPN)

The sensory processing needs toolkit has been specifically written for professionals working with children who have SPN within schools, early years settings and the wider community, and who have followed phase 1 of the guidance. Phase 1 includes accessing training to develop knowledge and understanding of sensory processing needs, however, the toolkit is self-explanatory and follows a step-by-step methodology, therefore additional training specifically for use of the toolkit is not necessary. It is intended to be implemented as part of the SEND graduated approach.

It is the view of the SPN steering group that in order to meet the needs of children with SPN we need to move away from a medicalised model. All within Children's Services, including NHS colleagues, are fully supportive of this premise. There is definitive agreement that there are professionals within all departments who have understanding of and skills to meet the needs of this group of children.

In addition, Children's Services support the further education and empowerment of those working with Derbyshire children so that the majority of needs of children who have sensory processing needs will be met without escalation to private advisers or higher levels of expertise.

### PHASE 1

- DCC Local area approach to supporting children with SPN-position statement (Appendix 2)
- SPN leaflet- An Introduction to Derbyshire Local Area approach to SPN (Appendix 2)
- Basic training in sensory processing needs. (Available through the Children's Services support services training offers)

Phase 1 must be completed before phase 2.

### PHASE 2

Sensory Processing Needs Tool Kit - developed to help professionals support children with sensory processing needs as part of the SEN code of practice graduated approach

SPN Champions - There may be some professionals who need further guidance when using the SPN toolkit. Occasionally a child may fail to show progress even in response to quality first teaching and implementation of the assess, plan, do, review model. In these instances the workforce can call upon the expertise of sensory champions. Champions are primarily situated within Children's Services support services. The role of Sensory Champions is to support the use of the tool kit once the school or setting have completed appropriate cycles of the assess, plan, do, review model. Although support services do not have promoted positions for sensory champions, they do have expertise over and above that which may be usually available from within the school or early years setting.

To be clear, the role of the sensory champions is not to provide support and guidance for individual children. It is to provide additional advice on implementation of strategies and resources within the toolkit.

### PHASE 3

Higher level intervention TBD (currently under development)



