

Sensory Spaces in Schools





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National Council for Special Education (NCSE)

The National Council for Special Education promotes a continuum of educational provision which is inclusive for all students. The NCSE provides support to schools; advises educators, parents and guardians; commissions and disseminates research on special education; and provides policy advice to the Minister for Education on the education of students with additional needs.

The NCSE delivers a wide range of Teacher Professional Learning (TPL) that includes a national calendar of seminars and workshops, and in-school supports designed to:

- Develop Teachers' knowledge and skills in supporting students with special educational needs;
- Promote a continuum of support which is inclusive and responsive;
- Bring about improved educational experiences and outcomes for all students.

School Inclusion Model – Occupational Therapy

This resource was created by Occupational Therapists (OTs) to support the implementation of the School Inclusion Model (SIM) in schools. The School Inclusion Model (SIM) enables schools to access the expertise of Speech and Language and Occupational Therapy to build teacher capacity to support teaching and learning with the aim of improving education outcomes for children. SIM therapists work collegiately as part of the SIM team comprising of NCSE Support Teams, NCSE Therapists and the National Educational Psychological Service (NEPS) psychologists. The SIM team support students with special educational needs by enhancing the skill set of all staff to meet the needs of students.

The SIM team provide a systemic approach to build the capacity of school communities to meet the needs of children using the Continuum of Support framework. This joined up thinking and wrap around support structure enables OTs to share and model their expert clinical skills and knowledge of best evidence based practice with schools to support them in meeting the occupational therapy needs of these students. The multiplier effect of this support, where sharing of this learning is generalised across the entire education system, is targeted at improving outcomes for students.

Background

The content of this booklet is based on research evidence and therapists' professional experience of working with schools.

This booklet is intended to be used by school staff and may be beneficial for schools who are looking to develop, or to make changes to, a designated sensory space within their school or classroom.

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We would like to sincerely thank Ransboro National School, Sligo for their help in providing us with images of their Sensory Spaces which we have incorporated throughout this booklet.

Introduction – We are all Sensory Beings!

Our day is full of sensory experiences from the moment we wake up to when we go to sleep. We all respond to sensory information within our environment differently as we touch, move, see, hear, taste and smell things around us. The environment in which learning takes place has a significant impact on the participation of children, especially those with disabilities (Maciver et al., 2019).

This resource aims to highlight the importance of teachers and school staff creating and using sensory spaces in schools to enhance and promote the health and wellbeing of the whole school with a focus on both the culture and the environment. This closely links with the aims of the Wellbeing Policy Statement Framework for Practice 2018-2023.

The resource provides a strengths based, student centred approach to looking at the sensory environments within a school and establishing a culture where sensory spaces and sensory strategies are utilised throughout the school day. It offers guidelines for teachers and school staff to holistically support students by collaboratively creating and using sensory spaces with their students.

The document aims to:

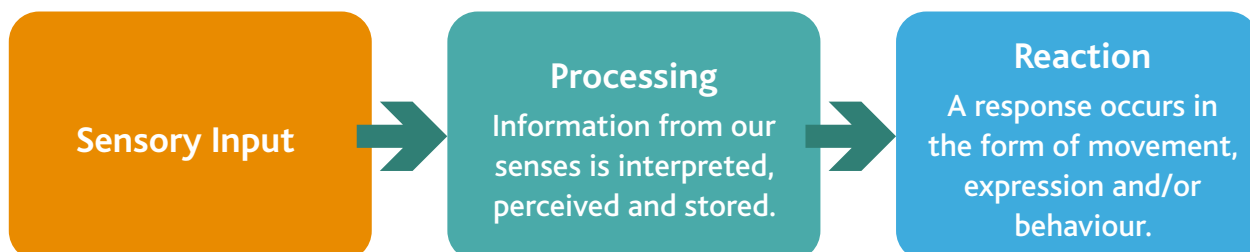
- enrich the capacity of teachers and school staff to meet the learning needs and enhance the participation of all students, especially those with sensory needs
- provide teachers and school staff with opportunities to utilise sensory spaces within a school to meet students' needs across the continuum of support from whole school and classroom level to targeted group and individualised school support
- enhance teacher and school staff learning, knowledge, skills and ability to monitor and reflect on student's sensory needs and support students to develop self-awareness and self-management skills.

Students with additional needs and vulnerable groups are particularly at risk in the area of wellbeing (NCSE, 2014). Students learn more effectively and have better academic outcomes if they are happy in their work, believe in themselves and feel acknowledged and supported in their schools.

* NCSE offer a seminar on sensory processing which provides an overview on the sensory systems and general strategies which help address sensory needs in students with sensory processing differences. The Autism – A Sensory Perspective seminar can be booked on <https://ncse.ie/for-schools/connect-teacher-professional-learningevents-catalogue>.

What is Sensory Processing?

Sensory processing is *"the ability to take in, sort out, process and make use of information from the world around us."* (Ayres, 1979)¹



Sensory information is picked up by sensory receptors all over the body. The receptors pass the information to the brain. They help us process, interpret and then choose the appropriate response to the sensory information.

Sometimes difficulty with sensory processing happens when the brain cannot sort out, filter, organise, analyse, and connect or integrate sensory messages. It is like a "traffic jam" in the brain, with some bits of sensory information getting "tied up in traffic". When this happens, certain parts of the brain do not get the sensory information they need to do their job.

"Children who have difficulty processing sensory information effectively often have trouble completing school and home based tasks requiring them to sit still, attend to instruction, be able to engage socially with peers, and play/work cooperatively with others." (Brunkner et al. 2018). It is important to recognise that difficulties interpreting sensory information can have an impact on how we feel, how we think and how we behave or respond. For more detailed information on sensory processing and self-regulation, please refer to the NCSE information booklets on Sensory Processing and Self Regulated available here:

- <https://ncse.ie/wp-content/uploads/2020/03/Lets-Get-Regulated-Information-for-Parents.pdf>
- <https://ncse.ie/wp-content/uploads/2020/03/Sensory-Processing-booklet-for-parents.pdf>

The school and the classroom can be filled with lots of sensory information which some students may find overwhelming. Incorporating classroom wide movement breaks and providing opportunities for movement throughout the school day can support student's wellbeing and sensory needs. By modifying the environment to support student's sensory needs and creating sensory spaces we can enable students to engage and access the school curriculum.

¹ Dr Jean Ayres (1979) was the first author to use the term 'sensory integration' to describe sensory issues in children and the first Occupational Therapist to conceptualise sensory integration. Her work was seminal in developing an understanding of clinical neuroscience, the importance of experience in brain development, the role of tactile defensiveness and sensory modulation disorders as contributors to behavioural disorders, and the impact of sensory integration in autism.

What is a Sensory Space?



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A sensory space is a designated area within a school which can support a student's sensory preferences and needs. It is a space which aims to provide students with the *individualised* sensory input they need to self-regulate, so they can be better prepared for learning and interacting with others. A sensory space addresses the primary senses; sight, hearing, smell, touch, vestibular and proprioceptive. Other terms used to describe a sensory space include – Sensory room; Calm space; Chill out room; Multi-sensory room and Sensory garden.

Why Create a Sensory Space?

A sensory space in the school environment promotes a positive school culture and climate in supporting student's health and wellbeing. Sensory spaces can benefit all students, especially those who have been exposed to trauma, chronic stress and those with specified sensory needs. They can provide a safe environment where the student can be supported to calm and regulate, therefore optimising learning and participation in the school environment. The Sensory Space should be flexible, changeable and adaptable in order to meet the needs of students.

There are many benefits to creating a sensory space:

- Sensory Spaces can reduce sensory overload for students who may find the school day overwhelming and enable them to achieve a calmer state for learning.
- Sensory Spaces can also provide increased sensory input for students who require more stimulation to enable them to regulate their sensory and emotional needs (Middletown, 2021).
- Sensory spaces can incorporate mindfulness activities to support interceptive awareness to facilitate self-regulation and support social and emotional learning (Lynch, et al., 2020).
- Sensory spaces can promote **self-care, self-nurturance, empowerment, skill development, resilience & recovery** (Champagne, 2006).
- Sensory spaces can also be used as part of a school's trauma informed approach to supporting students who have experienced loss of a consistent caregiver, neglect, different forms of abuse and maltreatment, and chronic stress (Koomar, 2009; Whiting, 2018). For more information on trauma informed approaches please refer to the beacon house website <https://beaconhouse.org.uk/?section=welcome-to-beacon-house>.

Whole School and Classroom based Movement and Sensory Breaks

Prior to using the sensory space consider strategies that can support students in the classroom or broader school environment, and may benefit all students. These could include movement breaks involving proprioceptive, vestibular, tactile and calming activities. These movement breaks can support students and can be provided as regularly as every two hours. They might also include opportunities for self-regulation in the classroom including breathing activities, mindfulness and short movement breaks. Please see the movement in the classroom booklet for more classroom based movement strategies and games.

<https://ncse.ie/movement-breaks-in-post-primary-classrooms>

What are Our Sensory Systems?

Sensory information is essential for our brains to function. It is necessary for our attention and concentration, building social relationships, organisation of tasks and is fundamental to learning. There are eight sensory systems which provide us with information which is vital to our understanding of the world and how we respond to it (Addy, 2016).



SIGHT

Provides information about objects and persons.



HEARING

Provides information about sounds in the environment (loud, soft, high, low)



SMELL

Provides information about different types of smell (musty, flowery, pungent).



TASTE

Provides information about different types of taste (sweet, sour, salty, bitter).



TOUCH

Provides information about the environment and object qualities (touch, pressure, texture, hard, soft).



VESTIBULAR

Provides information about where our body is in space and speed and direction of movement.



PROPRIOCEPTION

Provides information about where a certain body part is and how it is moving.



INTEROCEPTION

Provides information about how our body is feeling (hungry, tired, anxious, scared).

How and When to Use a Sensory Space

A sensory space can positively impact on students learning and wellbeing when used appropriately. It is important to consider how the sensory space is being used to meet the needs of the students, this is the most effective way to ensure the success of the sensory space. Some students require more sensory input during the school day and a sensory space can positively impact on students learning and wellbeing when used appropriately.

The following section provides detailed considerations to guide teachers on how to plan and structure sensory activities when using a sensory space. The key considerations are divided into three sections; considerations before, during and after using a sensory space.

Before Using the Sensory Space

The following are key:

- Observe the student and their levels of alertness throughout the school day. **Try to schedule in whole class or group movement breaks frequently throughout the day to support all students' regulation.** Observe if there is a pattern to the time(s) of the day when they get overwhelmed or need a break. Try to schedule in visits to the sensory space when students need more sensory input at this time.
- **Use the room as proactively as possible** by incorporating sensory escape/space time into their daily routine. The sensory space should be used with students at regular scheduled times of the day to support and maximise their participation in school based activities (Maciever et al, 2019). This helps to support student's self-regulation skills.
- **It is important to never force a sensory activity** as this could be a negative or traumatic experience for a student. The space should always be supportive in meeting the student's needs. It is important that this space is not used as a reward or for managing behaviour.
- Collaborate with school and family systems to promote predictability across environments
- It is important to ensure consistent access to movement breaks and sensory spaces by incorporating sensory escape/space time into their daily schedules and routines.
- It is important that the teacher/SNA is calm and regulated to provide co-regulation, self-regulation and emotional wellbeing to the student when using the sensory space.

Factors to Consider Before Using a Sensory Space

- **Student voice** – it is important to consider the student's needs prior to and during the activity. Think about what are their interests? Favourite colour/toy? What do they seek in the sensory space?
- What is the **desired outcome** for the student? Is it to give them an escape from the busy sensory filled classroom or a sensory break?

- Would the student benefit from a **calming or alerting** activity?
- What **equipment** are you going to use to meet the student's needs?
- What **supports for transitioning** will I use? E.g. visual schedule, first, then visual, time timers.

While Using the Sensory Space

- **Guide the student towards either calming or alerting activities**, depending on what he/she needs. Please see our alerting and calming guide in Appendix A. If the student needs alerting activities, ensure to do some calming, organising activities afterwards before they return to class, so they are ready to focus and concentrate. Please see our movement break booklet and video here for more information <https://ncse.ie/movement-breaks-in-post-primary-classrooms>
- **Observe the student's responses to all activities** completed in the sensory space. Notice if they find the activity calming, organising or alerting. Observe their body language and facial expression during the activity.
- If you are using social emotional learning programs such as the '**Alert Program**' (Williams & Shellenberger, 1996) or the '**Zones of Regulation**' (Kuypers, 2011) in your classroom, these can also be used in the sensory space. These programmes use sensory integration theory and provide students and teachers with strategies and a shared language to learn self-regulation skills.
- **Adult Supervision**-The students should be supervised at all times when using the sensory space. Research has identified that the most important piece of kit in a sensory room is always the person facilitating the session (Grace 2020, Ashdown 2013). This is essential to remember when using the sensory space.
- **Transitions**: A visual schedule, timer or object of reference can be used to prepare the student for transitioning in and out of the sensory space.

After Using the Sensory Space

- **Observe** the student after using the sensory space. Are they calm, organised and relaxed?
- Was the **desired outcome** of the sensory space achieved?
- Is the student able to concentrate and attend when they **transition** back to the classroom?
Check in with student and class teacher to see how they feel following the sensory activity and when they return to the classroom. Use the Zones of Regulation or Alert Program concepts and language to support student self-reflection and learning.

Key Considerations for How and When to Use a Sensory Space

Plan and Prepare

Plan your sensory space time.

Prepare the student before transitioning.

Use timers and visual schedules.

Supervision

Supervision of an adult is always required in a sensory space and when using equipment.

Use

Use the room at a predictable time which is scheduled into the student's day.

Do not use the space as a reward or for managing behaviour.

Student Voice

Give students choice in the sensory space.

Never force a sensory activity.

Equipment

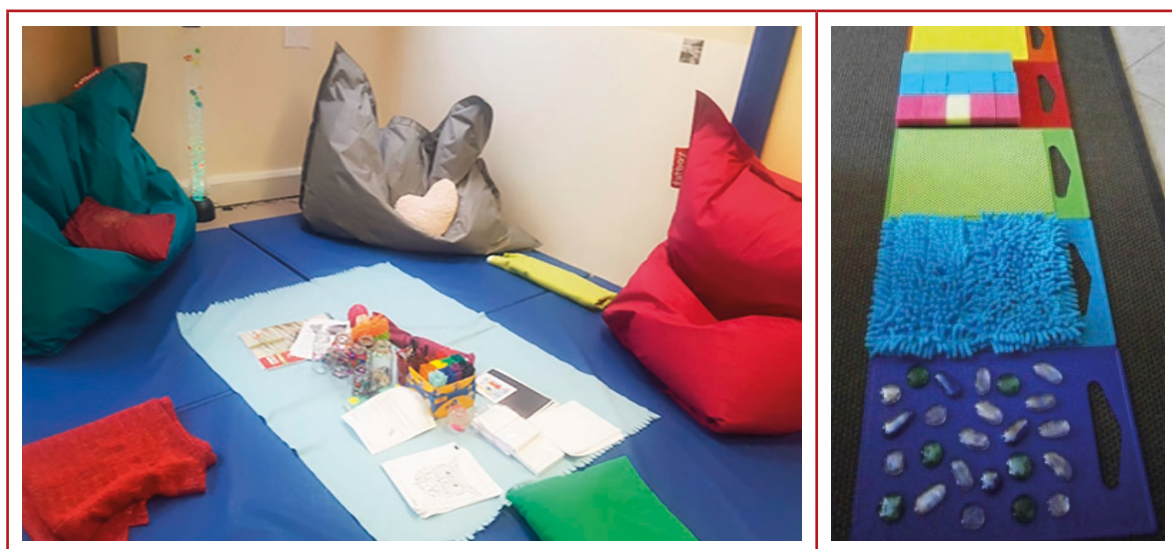
Plan what equipment should be turned on before a student enters the space. Change lighting or add music depending on the students' needs.

Not everything should be on at once (lights, projectors, music).

Safety

Schools should ensure every adult facilitating the sensory room has the appropriate information and training, if required to use the equipment safely.

Creating a Sensory Space



A Sensory Space is a designated space which can optimise a student's learning. Sensory spaces and sensory based activities such as movement breaks can be incorporated as whole class or small group activities to help support a student learn and regulate during the school day. Creating a sensory space in the classroom, in the corridors or school yard can support student's participation in play and social and emotional learning.

When designing a sensory space, it should be **flexible and adaptable** to students' differing needs. There are certain environmental factors to consider when creating a sensory space in school. These include the auditory environment, lighting, spatial sequencing, escape spaces/ calm quiet corner, equipment and storage. For more information on building and design guidelines please refer to Dr Magda Mostafa's work called Autism ASPECTSS Design Index here <https://www.autism.archi/aspectss>.

Auditory Environment

- It is important to consider the impact noise has on the sensory space. The acoustic environment can be controlled to reduce background noise, echo and vibrations. Students should be supported to move from one level of noise to the other in a graded manner to prepare them for different noises. It is important to consider the following questions;
- Is the space next to a noisy corridor?
- Can this be reduced by soundproofing or providing background music or sounds?
- Is it possible to introduce up-tempo music for students in need of 'alerting' energy levels?
- Is it possible to introduce calm, soft music to support relaxation in the environment?

Lighting

- It is important to consider visual stimuli in the sensory space. Some students can be hyper or hypo sensitive to visual stimuli which may make them either struggle to relax or put them to sleep. It is important to consider options to dim the lights or increase the brightness as needed to create a calming or alerting environment
- Is it possible to introduce an adjustable blind to reduce or increase natural light as needed?

Spatial Sequencing

- It has been identified that routines and predictability supports students with difficulties (Maciver et al 2019 and Lynch et al 2020). Similar to sensory zoning, spatial sequencing requires that spaces be organised in a logical order. Spaces should flow in as seamlessly as possible.

Escape Space/Calm quite corner

- This is a space to provide 'time out/chill out time' to the overwhelmed student. These spaces provide a neutral sensory environment with minimal sensory input and help calm and relax the student's central nervous system so they can transition back to the classroom.
- Is there an option to introduce an escape space/cozy corner in your classroom where some students can experience the calm environment?

Equipment

- Think about the effects some equipment can have on students sensory systems. Some students will find it relaxing to sit and watch bubble tubes and light projections, whilst others need to complete heavy work activities to help calm, such as crawling through tunnels, jumping on the trampoline and completing peanut ball exercises. Sometimes there may be too much choice and equipment in the room which distracts and overwhelms the student.

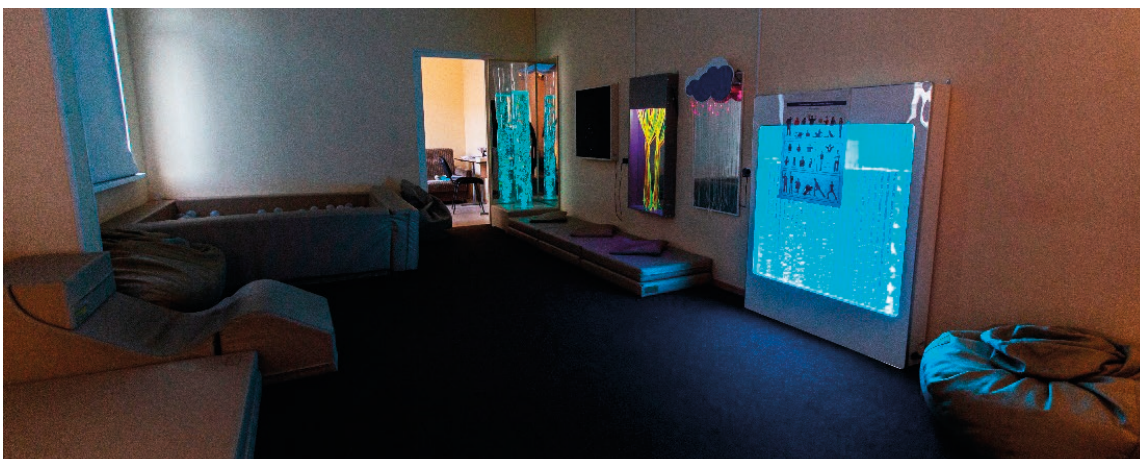
Storage

- It is important to consider the equipment in the environment as 'too much' or certain equipment may be too overwhelming for students. If the student becomes overwhelmed it is important to reduce the sensory stimuli in the environment. Therefore, appropriate storage spaces are important to match the equipment with the student's needs.

What a Sensory Space Could Look Like

There is no one way to create a Sensory Space. A Sensory Space or sensory support is any technique or piece of equipment that increases or decreases sensory input to optimise students learning. It can be a calm, quiet corner which enables students to practise mindfulness and/or breathing techniques which supports students to regulate during busy times of the day. It can be a more active space, such as providing play based proprioceptive movement exercises on the sensory corridors for those students who need their levels of alertness to increase. You can create a Sensory Space in the classroom which is a simple way to give your students easy and flexible access, to a regulating space, as needed during the day. You can consider how to support student's participation in play (indoors and outdoors) through zoning and structured, predictable activities. The goal of any Sensory Space is to support students to develop self-regulation strategies and reach the levels of alertness they need to concentrate and attend during the school day.

The most important piece of kit in a sensory room is always the person facilitating the session (Grace 2020, Ashdown 2013). They should be attentive to the students sensory and regulation needs while building self-regulation skills. This is key to remember when using the sensory space.





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Creating a Sensory Space Within a Classroom

Sensory spaces can be set up in the classroom, this can be beneficial for students who need a calming space to retreat to on a frequent basis. A timer can be used to show the student how long they can stay there for. A visual schedule can also be used if needed.

Consider the **environment**:

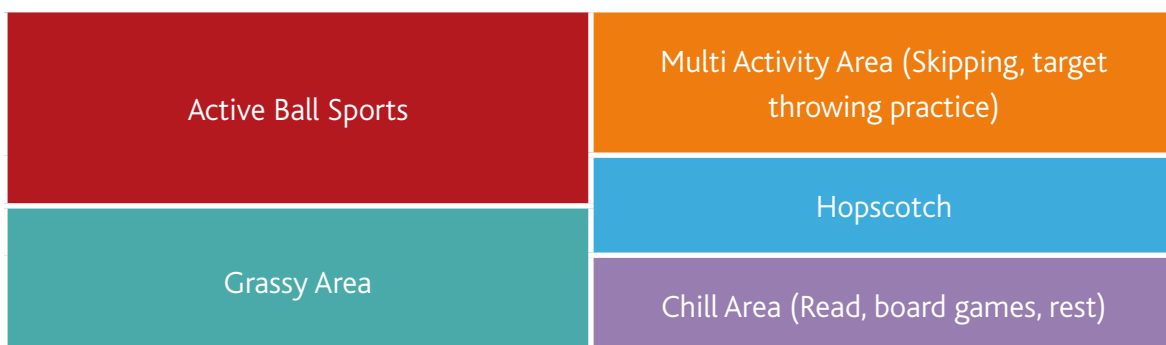
- Furniture that could be used as a separator, e.g. bookshelf.
- A curtain could separate the space from the main room.
- The space could consist of a table with cloth draped over it, or a pop up tent.

Consider **resources** within the space:

- Small beanbag, cushions, blanket
- Headphones
- Lava lamp
- Fidget toys
- Fairy lights
- Sensory bottle (water with glitter etc in a bottle)

Outdoor Sensory Space

The playground can be a difficult area for some students. The constant sensory input and unpredictable nature of a playground can be very overwhelming. When creating a sensory friendly outside space try to consider the following:



- Develop an **area/zone** in the playground that students can access for **quieter play time**. It should be less unpredictable and overwhelming for students that want to access more structured play activities during this challenging unstructured time. A system that limits the amount of time the student has to stay in the playground and then allows them time inside engaged in a quieter activity before having to return to class after break can be beneficial.
- Provide a **quiet indoor space** option for students that have difficulty coping with busier outside spaces. The number of students accessing this space at any one time during break should be limited to avoid another over stimulating environment.
- Provide **structured activities** which may be less sensory overwhelming than games such as tag, 'chases' and football. Examples may include a treasure hunt, a nature trail or hopscotch.
- Students with sensory processing challenges who avoid busy noisy environments are at risk of social isolation and mental health difficulties. Schools should consider '**autism acceptance**' initiatives that promote the concept of students as '**allies**' (Cremin, 2018).
- Establish sections in the playground which involve **proprioceptive input**. These are regular childhood games but that will engage the student in physical activity that can be calming. Examples may include:
 - Skipping
 - Hopscotch
 - Crawling through tunnels and obstacle courses
 - Wheelbarrow walks
 - Tug of war
 - Jumping games

Just like an inside space, try to incorporate some resources from all the senses if possible into an outdoor sensory space. For example: touch (chalk board on wall); Vision (Visually appealing items such as ribbons tied to fences, mobiles or windmills; oral motor (bubbles); hearing (music wall); smell (plants such as lavender or lemon balm).

Sensory Corridors

School corridors can also be used to get sensory input into students that need it. Simple sensory motor trails can be completed when students are transitioning from one room to another. See below for some ideas.



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Sensory Equipment Ideas

Designing a sensory space specific to your school's needs can be done on a budget. There is little evidence to suggest that expensive and complex equipment results in better outcomes for students (Grace, 2020). It is advisable to consult with an Occupational Therapist where possible as they can provide specific advice if necessary. See the section below 'Equipment ideas'.

Touch

- Sensory boxes: sand, stones, rice, pasta etc.
- Fidgets
- Playdough/Theraputty
- Vibrating cushion/ladybug
- Homemade texture board (sandpaper, feather, carpet, sticker, silk etc.)
- Homemade stress ball
- Pillows, blankets

Sound

- Speaker
- Over ear headphones
- Ear defenders

Sight

- Lava Lamp/Bubble Tube
- Glow sticks
- String lights, battery powered candles
- Homemade Glitter bottle
- Torch

Smell

- Cushion with lavender essential oil
- Hand cream/lotion

Vestibular (Balance & Movement)

- Peanut Balls/Therapy balls (different sizes)
- Stepping stones
- Fun Deck Therapy Ball Activities
- Scooter board
- Balance Board
- Space Hopper
- Trampette

Proprioceptive (Body Awareness)

- Body Sox
- Fun Deck: 'Move Your Body Cards'
- Large cushions/Bean Bags
- Fun Deck: 'Upper Body and Core Strength Cards'
- Heavy Blanket
- Resistance bands
- Tunnel
- Balloons

Interoception

- Yoga mat
- Resistant bands
- Images of square breathing or mindful colouring activities
- Bean bags
- Fidgets
- Mindfulness scripts
- Weighted lap belt
- Therapy putty soft and firm
- Calming music
- Heavy blanket
- Breathing strategies

Other

- 1,3,5 minute sand timer
- Oral Motor resources – Bubbles, Straws and cotton balls, crunchy snacks, Straws and water basin, musical instruments
- Small tent

Key Considerations When Creating a Sensory Space

Sensory spaces can be beneficial to all students, especially for those with special educational needs. Sensory spaces can support student's engagement, participation in learning and ability to access the curriculum.

The Sensory Space

Designated Sensory Space

- Is a designated space within the school, used to optimise a student's learning.
- Is flexible and adaptable.
- Think about how and when plan to you use the space for students.
- Consider the students sensory preferences and needs.
- Consider the purpose of the sensory room for the student.

Classroom based Sensory Space

- Is easily accessible and can support all students in the classroom.
- Can support students who need a calming space throughout the day.
- Think about simple separate spaces e.g. pop-up tent, library spaces.
- Think about simple resources e.g. cushions, bean bags blanket, headphones, fidget toys.

Outdoor Sensory Space

- Helps students who find the playground overwhelming.
- Think about zoning outdoor space to include active areas and chill out/quiet areas.
- Promote the students voice and choices. Consider the students sensory preferences and structured, predictable and consistent games to support participation and engagement.
- Encourage the student to participate in extracurricular activities like sports which follow the students strengths and interest.

Sensory Corridors

- Can provide creative, movement breaks to individual or groups of students while learning.
- They can provide the student with proprioceptive and vestibular input to support students' attention, self-regulation and transitions in school.

Be Flexible and Adaptable

We all respond differently to sensory information and experiences. Therefore sensory spaces need to be flexible and adaptable.

Can the sensory space be individualised to the students' needs and preferences?

Environmental Factors

Consider all eight senses: hearing, sight, taste, smell, touch, proprioceptive, vestibular and interception and how these impact on the students sensory environment.

Pay attention to the auditory environment-is the sensory space located near a busy corridor or noisy environment? Can music, headphones or soundproofing be used?

Think about the lighting within the space – What is the level of brightness and natural light, can it be adjusted or can black out blinds be used?

Think about how the space is organised and how the student can move through the space – Can zoning and spatial sequencing be included?

Budget

Designing a sensory space specific to your school's needs can be done on a budget.

There is little evidence to suggest that expensive and complex equipment results in better outcomes for students.

Student Voice

Always consider students voice and interests when creating and using the sensory space. Identify if students need calming, organising or alerting activities.

Equipment

Consider the different sensory equipment in the school environment. Is the sensory tool calming, regulating or alerting for the student? For example looking at a bubble tube is generally calming and relaxing in the sensory space.

Ensure that the sensory environment is not too cluttered or overwhelming for the student.

Ensure the 'just right' challenge which sets the student up for success in the sensory space.

Have designated storage spaces for the equipment which is not being used.

The most important equipment is the person facilitating the session in the sensory space and how they use the equipment!

Planning to Support Transition

Would your students benefit from having timers in the space?

Would your students benefit from having visual schedules to support transitions to and from the sensory space.

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Useful Websites

<https://sensory-processing.middletownautism.com/sensory-strategies/setting-up-a-sensory-lounge/>

<https://www.nationalautismresources.com/school-sensory-rooms/>

<https://www.education.sa.gov.au/sites-and-facilities/facilities-maintenance-and-design/design-everyone/designing-calming-or-stimulating-sensory-learning-spaces>

<https://asiam.ie/wp-content/uploads/2018/04/What-is-in-a-relaxation-Room.pdf>

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www.AsIAm.ie

www.ghaea.org/files/OccupationalTherapy/Sensoryroom.pdf

sensoryprojects.co.uk

Appendix A

The table below provides some general information on how different activities can have an impact on the different senses and states of alertness. However, please take this information as a general guide and be aware, there is no 'one size fits all' when it comes to sensory strategies.

