



An Chomhairle Náisiúnta
um Oideachas Speisialta
National Council
for Special Education

The Physical Classroom Environment

Creating Universal Learning Spaces





**An Chomhairle Náisiúnta
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National Council
for Special Education

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This booklet was developed by National Council for Special Education (NCSE) Occupational Therapists working in collaboration with NCSE Speech and Language Therapy and Advisor colleagues. The content of the booklet is based on research and practice based evidence from working in schools.

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Glossary

- **Executive Functioning**

Executive functioning is the mental processes that enable us to plan, focus attention, remember instructions and juggle multiple tasks successfully. The brain needs this skillset to filter distractions, prioritise tasks, set and achieve goals and control impulses (Harvard University, 2015).

- **Inclusive Education**

Inclusive Education as defined in NCSE (2024) is on-going process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination (UNESCO, 2009).

- **Neurodiversity**

Neurodiversity is the idea that all brains process information differently. Neurodiversity includes everyone and it highlights how each person thinks, communicates and senses the world around them in a unique way. Within this, people may be neurodivergent or neurotypical. Both neurodivergent and neurotypical brains are naturally occurring (Middletown Centre for Autism, 2023).

- **Neurotypical**

Neurotypical refers to people whose brains develop and/or process in a way similar to the majority (Middletown Centre for Autism, 2023).

- **Neurodivergent**

Neurodivergent refers to people whose brains develop and/or process in a way that is categorically different to the majority (Middletown Centre for Autism, 2023). This includes neurodevelopmental differences such as autism, attention deficit hyperactivity disorder (ADHD), dyslexia and others.

Neurodivergent people experience and interact with the world in a different way. These differences are to be embraced and encouraged (Neurodiversity Ireland, 2024).

- **Participation**

Participation can be seen as 'doing' a task, but for meaningful participation to take place, other key ingredients are required such as social connection, motivation and most importantly, choice (Maciver 2019). Occupational participation refers to 'engagement in work, play, or activities of daily living that are part of our sociocultural context and that are desired or necessary to our wellbeing' (Kielhofner, 2008).

- **Self-Regulation**

Self-regulation is the ability to understand, monitor and modify energy level, emotions, attention, social interactions and prosocial thinking and behavior (Shanker 2013).

- **Universal Design**

Universal Design (UD) is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability (Centre for Excellence in Universal Design, 2024).

- **Universal Design for Learning**

Universal Design for Learning (UDL) is an approach to curriculum development that promotes access, participation, and progress for all learners. UDL is underpinned by neuroscience research and aims to improve not only the learning outcomes, but the learning experience for all students. Students learn differently and to effectively teach all students, pedagogy needs to include greater flexibility and offer students more choice (Center for Applied Special Technology, 2018).

Disclaimer

All changes carried out within the classroom environment are the responsibility of the classroom teacher. The teacher is responsible for ensuring that all classroom adaptations are implemented safely and in line with school policy.

It is important that the teacher is aware of students' abilities so that changes made to the environment are appropriate and accessible for all. The teacher is responsible for assessing the risk prior to implementing any environmental changes.

Statement on Language

The National Council for Special Education (NCSE) acknowledges the variations in language used to describe educational needs and disability. For some individuals, person first language, for example, "person or individual with disability" is the preferred term. For others, their preference is 'identity first language' (IFL), for example "autistic". The term "neurodivergent" is emerging as a preferred term to acknowledge individuals in all their diversity. To embed an inclusive approach, the NCSE use all three terms interchangeably.

To reflect that this document has been designed for children and young people from ages 4-18 in all school types, we have consistently employed the term 'student' throughout.

As of 2024, and to the best of our knowledge this document uses language and practices that are reflective of current research and evidence. We recognise that language and whatever is considered best practice with regard language may evolve over time.

Acknowledgements

NCSE Occupational Therapists worked in partnership with several schools in the development of this booklet. These schools granted permission for photos of their classrooms to be included in this document. The NCSE would like to thank the following schools for taking part:

- **Patrician Primary School, Newbridge**
- **Scoil Bhríde, Athgarvan**
- **Loreto Senior Primary School, Crumlin**
- **St Laurence College, Loughlinstown**

Patrician Primary School kindly agreed to take part in a reflective practice exercise. For two weeks, two 6th class classrooms trialled a range of dynamic seating and experimented with classroom furniture rearrangements. The objective of this exercise was to explore student and teacher perspectives on the perceived impact of these changes on learning and school enjoyment. The teacher and student reflections are integrated throughout this document.



Introduction

By tuning into the classroom environment, we unveil a world of possibilities where every student can feel safe, seen, valued, and empowered to learn. By embracing the variability of our students and minimizing barriers to participation, we can cultivate an atmosphere of belonging and growth. Whether you're teaching 6-year-olds or 17-year-olds, we hope this booklet serves as a valuable tool to help you foster an inclusive learning environment for everyone.

Aims of this booklet

This booklet has been developed to assist teachers to review and make changes to their physical classroom environment that will support meaningful student participation in learning. The best way you can interact with this booklet is to:

- Notice what is already working well in your current classroom set up.
- Review the range of practical, evidence-informed strategies.
- Apply some of the suggestions to your physical classroom environment.
- Reflect both individually and with your students on the changes, and adapt as necessary.

The booklet is for teachers working in:

- Primary schools
- Post-primary schools
- Special classes
- Special schools

We recognise that no two classrooms or student groups are the same. We encourage you to use this booklet over time, reflect on the ideas provided and identify what will work for your classroom. The classroom is a flexible and adaptable space. Hence, adjustments made to the space should not be static but instead continuously reviewed and evolve in response to the changing needs of the students.

Why Focus on the Physical Environment?

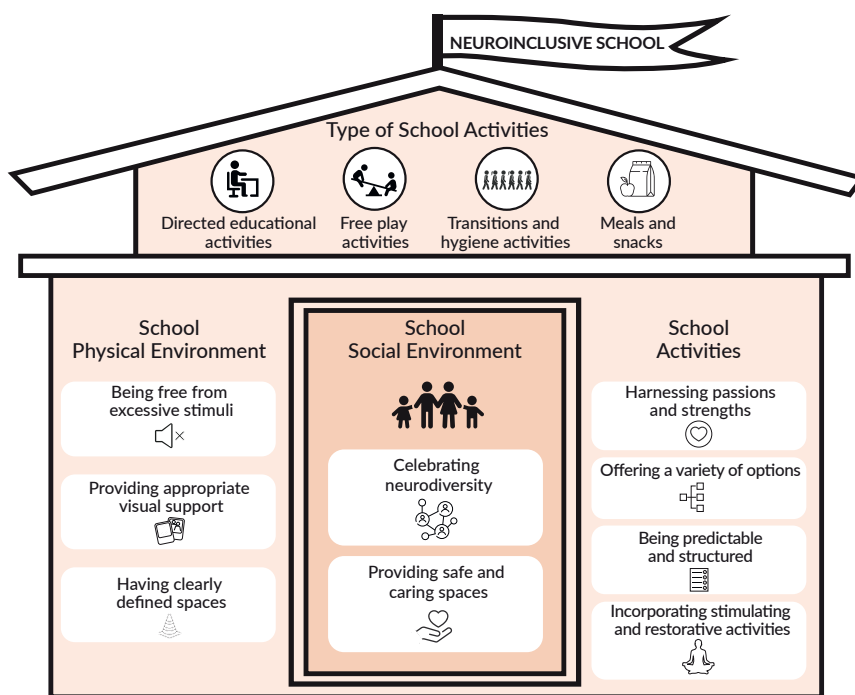
The physical environment of the classroom is made up of everything we experience through our senses. It includes;

- The **things we see** such as learning displays, screens, desk layout and natural and artificial light sources.
- The **sounds we hear** such as the hum of the projector, the screech of chairs being moved and the volume level of the interactive whiteboard.
- The **odours we smell** from the canteen or the perfume worn by the teacher.
- The **textures we touch** like arts and craft materials, food and items we like to fidget with.

The organisation and structure of the space and materials within the room play a key role in how students manage this sensory stimulation to be able to engage with the learning activities of the day.

How we set up our classroom impacts directly on the student educational outcomes of attainment, attendance, happiness and independence (Douglas et al., 2012). Evidence shows that the physical characteristics of learning spaces have a significant impact on educational progress. The Holistic Evidence and Design (HEAD) study by Barrett and colleagues (2015) found that learning environments account for 16% of the variation in pupils' learning progress across a single year.

Neurodiversity-affirming practice emphasises the importance of celebrating neurodiversity and valuing different ways of being and doing. It focuses on changing the environment to promote participation instead of trying to change behaviours (Rajotte et al., 2024). Research on inclusive education by UNESCO (2020) advocates for adapting school and classroom environments up front to the needs and strengths of all students so they can feel valued and respected in schools, develop their full potential, and feel a true sense of belonging. Inclusive classrooms that support all students, will have a greater understanding of diversity. This understanding and awareness of difference will build greater empathy amongst young people, and help develop a more inclusive society (NCSE, 2024).



A neuroinclusive school model supporting meaningful participation and wellbeing for neurodivergent students and their peers as cited in Rajotte et al. (2024)

Guiding Principles

Universal Design (UD) and Universal Design for Learning (UDL) aim to provide all students with equal opportunities to succeed no matter how they learn.

- **Universal Design** does this through the removal of physical and structural barriers.
- **Universal Design for Learning** does this through provision of multiple and varied formats for instruction and learning.

These approaches provide us with a lens to examine our classrooms and identify opportunities to make a positive impact on the learning experiences for all students.

Section 1: Students as Collaborators

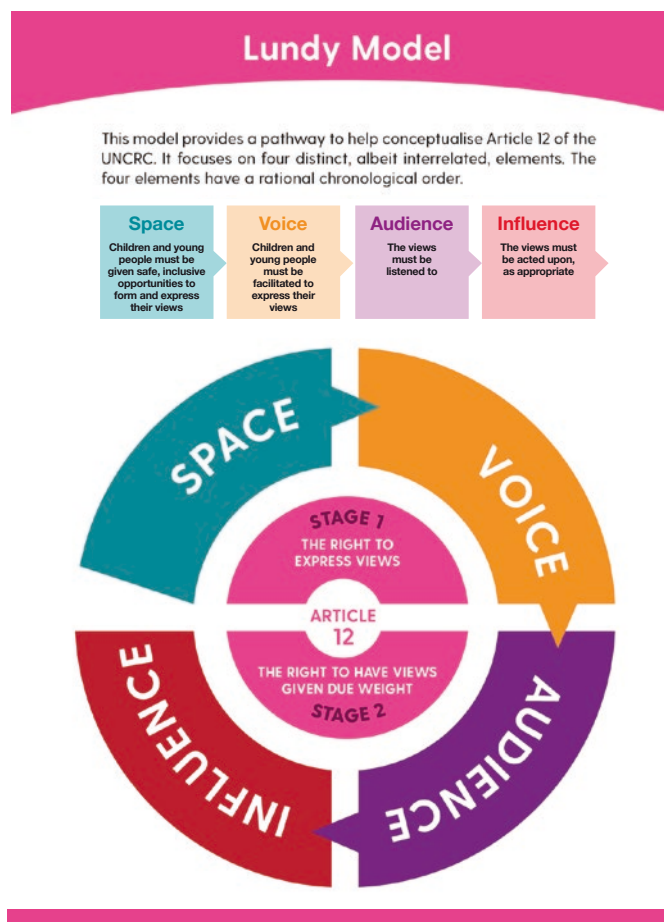
Students and teachers experience the classroom differently. Therefore, when it comes to classroom design, student input is essential. By seeing students as co-designers of the classroom, we can move from designing for our students towards designing with our students.

By designing your classroom with student input it can:

- Positively impact students' emotions and engagement in learning (Gremmen et al, 2016).
- Support students to feel empowered and understood.
- Promote student ownership of the space (Hare et al., 2016).
- Encourage students to use and interact with the spaces appropriately.

The Lundy Model of Participation

Meaningful student involvement is the process of engaging students as partners in every facet of school change. The Lundy Model of Participation is a practical process for fostering student participation through honouring students' views. Students have a right to express their views, feelings and wishes in all matters affecting them. Their views should be considered and taken seriously. The Lundy model underpins our approach to student collaboration throughout this booklet.



Lundy Model of Participation from Participation Framework: National Framework for Children and Young People's Participation in Decision-Making, Department of Children, Equality, Disability, Integration and Youth

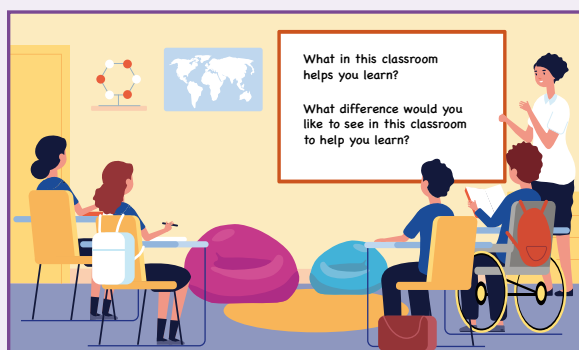
Meaningful Student Input

Involving students as partners in classroom design ensures their voices are captured before, during and after the changes are made. In the book 'The Space: A Guide for Educators' Rebecca Louise Hare and Robert Dillon (2016) discuss how to include students in the setup of the classroom space through the following steps:



How students express their views will depend on the age and profile of your class group. The two key questions you want answered are:

1. What in this classroom helps you learn?
2. What difference would you like to see in this classroom to help you learn?



Examples of how you can facilitate students to express their views:

Think Tank

Open forum discussion to determine what their best hopes for their classroom are.

Student Questionnaire

Written or electronic format for students to express views before and after changes made to their classroom.

Scrapbooking

An image search brainstorm online where students find 3-5 images of classroom environment ideas that would support their learning.

Dream Classroom

Invite students to draw posters, colour, paint or make models of what their dream classroom would look like.

Use of Visuals

Use visuals of spaces, ask them what they like, don't like. Ask them to share reasons and categorise what they see.

Photography

Students use cameras or tablets to take pictures of elements that help them learn.

Suggestion Box

Keep a space in your room dedicated to student feedback which is checked often.

Voting

Students pick their favourite spot and move to that area.

Focus Group

If multiple class groups share the same classroom, facilitate a smaller group of students from each class group to meet to express their views.

For students who are not yet speaking:

Total Communication

Use choice boards, communication boards, photos or objects.

Observation

Where in the classroom students spend a lot of their time, be reflective of this and incorporate this space more into their learning.

Collaboration


Ask their family or previous teachers what they think may be beneficial in the classroom environment to enhance participation.


**This is not an extensive list. Please feel free to come up with your own ideas based on the age and profile of your class.


My thoughts and feelings on the changes to my classroom

How do you feel about the changes to your classroom?

Circle the picture


 Don't Like


 Not Sure


 Like

Why did you pick this answer?

I love to be able to move around like wobbling on the wobble chair. I love the standing table because I can move my legs instead of my whole body. With the yoga balls you can ~~bounce~~ bounce on it because sometimes it helps me focus.



Go to your favourite area of the classroom/ where you work best... and WAIT



The area I chose was the standing table.

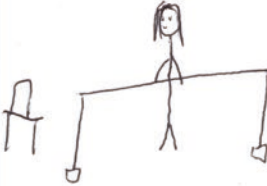

Why I chose this area?

I love the standing table because I can move my legs instead of my whole body and if you get tired of standing you can just grab a chair from the corner, or you can get a wobble chair and its the perfect combination.

Write/Draw


or


Sample of collecting student voice

!

For some students, changes to routine or environment can be stressful and dysregulating. Having a predictable environment signals safety.

Hence, it's important to involve students in the process and prepare them for any changes to the environment.

Section 2: Sensory Comfort

The sensory qualities of our classrooms have a direct influence on student occupational engagement and participation. Learning spaces that have **too much or too little sensory stimulation** can serve as a barrier to student energy regulation, attention and readiness to engage in learning – (O'Reilly & O'Donnell et al., 2023).

Many of our students have differences in how they process their sensory world and for many, the classroom can be a very busy and overwhelming place. The Sensory Integration Education organisation (2023) discuss how sensory inclusive classrooms build on universal design (UD) by making the environment accessible from a sensory perspective. Sensory friendly classrooms engineer sensory stimuli in a way that empowers neurodivergent individuals to fully participate and engage with the physical space. The bonus is that all students benefit from a sensory inclusive classroom that is comfortable and welcoming.



There are some **practical steps that we can take to reduce or remove sensory discomfort for our students.**

Become a Sensory Detective



Conducting a sensory audit of your room can support you to think about your space from a sensory lens. **The NCSE Classroom Sensory Screening Tool** (See appendix 1) is divided into 5 sections.

Each section looks at a different sensory system and provides you with a list of best practice statements to consider in relation to your classroom. In each section you are prompted to think about what is already working well and what you can do more of to increase the sensory comfort of your space.

Good Practice Statements To Consider



Classroom Lighting

- Artificial light is used only where necessary.
- Fluorescent lights are checked and changed regularly (to avoid flickering).
- Flickering light coming in through blinds is minimised.
- Position reflective surfaces like whiteboards to minimise reflection/glare.
- Monitor position of sunlight shining in when sun is low.
- Avoid putting displays and posters on windows.

Wall Colours

Colours in the classroom can be over or under stimulating:

- Lots of bright colour on the walls, such as red or orange, may be over-stimulating.
- Plain white walls with little colour features may be under-stimulating.
- A calm backdrop with additional colour elements helps to create an optimal level of stimulation. Some examples of how to apply this include using colours on furniture, soft furnishings, wall displays and notice boards.
- Different wall colours can differentiate zones within the classroom. For example, a corner of the room painted pale blue stages the calm corner area.

What are we doing well?

What could we do to increase the sensory comfort?

- I turn off lights and use natural lighting as much as possible.
- I am already aware of potential glare on the whiteboard.
- I always try using calmer colours as background colour on learning displays.
- I will take down all artwork on the windows.
- I will chart when the sun shines directly in the window. I can set daily reminders on my phone to close blinds at these time on good days or advocate for students to do this.
- I will review the Clever Classrooms document.
- I will be considerate of the effects of colour when adding any soft furnishings to my classroom.
- I will add calm coloured card (light blue and green) to wall area at the chill out space.

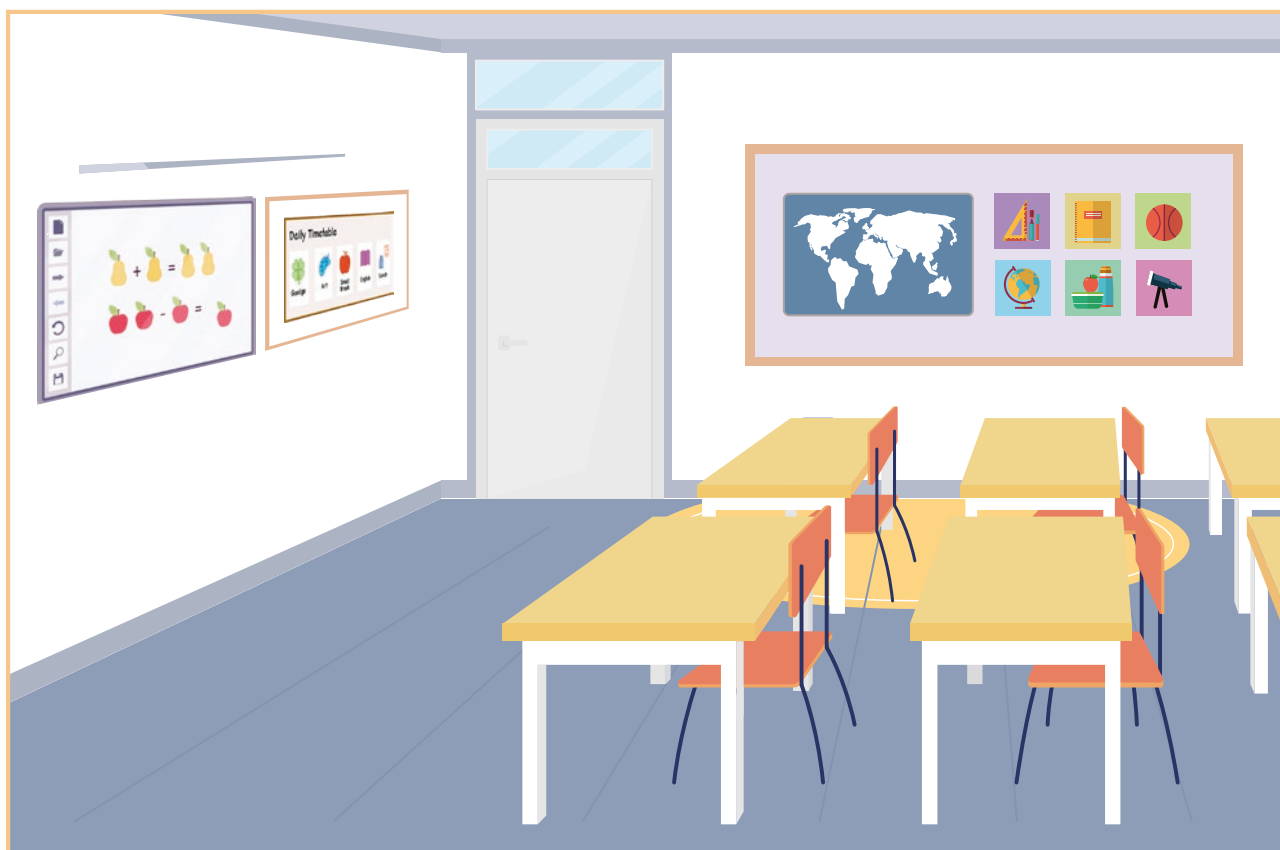
Sample section from a completed Classroom Sensory Screening Tool

What Can We See?

When you consider the visual qualities of your classroom design, keep 'simplicity' in mind. The goal is to create a visually organised space which promotes a sense of calm, visual comfort and reduces the demands on the students' sensory systems. Careful organisation of visual stimuli (posters, displays, furniture) and use of 'white wall space' can help draw students' attention to important stimuli and amplify learning (Hare & Dillon, 2016).

Consider what you put on your wall space:

- Is there sufficient visual resting space?
- Are the learning displays reviewed regularly and updated in line with your teaching plan?
- Is there a designated space to display student work? Does it have clear boundaries?
- Can students take responsibility for maintaining and changing the display regularly? This supports a sense of ownership and ensures displays are purposeful and up to date.
- Have you considered the functional qualities of the colour in your space? Neutral monotone palettes, with injections of colour introduced through the design elements of the room can help reduce the visual demands on the students' visual systems.
- Are there opportunities to adjust the lighting throughout the day? Can we maximise the use of natural light?
- Are there opportunities for soft lighting or lamps? Research has found that the use of soft and natural daylight helps create a sense of physical and mental comfort within the classroom (Barret et al., 2015).



What Can We Hear?

Acoustics are an important consideration when designing sensory inclusive classrooms. Whilst most people can adjust to varying noise levels, this can be much harder for students with sensory differences. Poor acoustic environments can negatively impact students' ability to access and meaningfully engage in learning.



Students may be highly distracted or fatigued by the extra efforts to try block out unwanted and competing background sound.



Students may find sounds uncomfortable or overwhelming.



Students may find unpredictable sounds stressful and dysregulating.

In order to try and maximise the acoustic comfort of your classroom consider:

- Are there background noises you can reduce?
- Can you make sounds more predictable? For example, using voice scales?
- Can you introduce sound absorbing materials to reduce the reflection of sound within the classroom?



Creating Space for Quiet

The ASPECTSS* Autism Design Index (Mostafa, 2015) highlights the importance of creating moments and spaces for quiet within the everyday classroom. It plays an important role in supporting students to cope with the sensory demands of the school routine. Having the opportunity to access a **quiet corner** in the classroom can benefit many students including students with sensory differences, students who need support to regulate their emotions or students who are going through a stressful event at home. According to Whiting and colleagues (2021) creating a quiet space is a universal proactive strategy to develop a sense of community, felt safety and healing throughout the education setting.

Quiet spaces can:

- Help students to prepare their body and mind for learning and interaction.
- Support students to recharge and regulate energy and emotions.
- Reduce sensory overload for students.
- Provide students with opportunities to access regulating sensory strategies.

The setup of a quiet space in your classroom will depend on your school setting, class size and the space available. Here are some important things to consider:

- **Where is the space located?**

In line with best practice, we recommend providing supports in the student's everyday learning environment. This may be in a corner of a room, behind a bookcase, in a pop-up tent or under a desk. A location that has reduced visual stimuli is best.

In **post primary schools**, it may not be feasible to set up quiet spaces in every classroom so we may need to be a little creative about how we can create quiet moments for our students. For example;

- Offer seating choices so students can choose to sit in a quieter working space.
- Weave quiet moments into your lesson (pauses for reflection, mindful movement breaks).
- Set up quiet spaces in locations that are accessible to students (library, support room, special class).

- **What is in the space?**

- Something comfortable to sit on or in – for example cushions, beanbags, a soft seat or a rug.
- Regulating sensory tools – for example hand fidgets, doodle pad or soothing music.

- **How can I support students to use this space?**

- Involve students in the set-up of the space.
- Introduce the space to the class and explain how it will help students in their school day.
- Set out clear expectations for effective use of the space.

More detailed information on how to set up a sensory space in your school can be found in the **NCSE Sensory Spaces in Schools resource booklet**.



!
Involve students when choosing the materials for the quiet space. Invite students to come up with a name for this space.



Examples of quiet spaces in primary school classrooms

Section 3: An Organised Oasis

There are endless photos and posts online that showcase aesthetically pleasing classrooms. However, we must consider how the classroom lends itself to supporting the ultimate goal of ensuring all students are able to meaningfully participate in learning. If you setup your classroom in a structured and organised way, with consideration of sensory comfort (Section 2), students can predict what will happen from lesson to lesson and day to day. With predictability and a consistent routine, an increased feeling of safety follows. When a student feels safe in a classroom they have a higher chance of being regulated and available to learn (Shanker 2012).



This section considers three core areas that will support you to organise your classroom and make it a more predictable and inclusive space for all:

- Zoning
- Visuals
- Storage of Materials

Zoning

Zoning is an effective strategy to support the creation of a predictable and organised environment. Zoning is the process of organising your classroom into functional and purposeful spaces. Through the use of clear visual boundaries and visual cues, we can provide meaning to the different classroom spaces for our students. The physical aspects of the classroom should support intentional movement through the space as well as provide cues for behaviour and academic supports.

We understand that you don't get to choose the size of the classroom you work in or the resources available. However, with some careful consideration of existing resources, successful zoning is possible. A zone does not need to be a permanent fixture. If the needs of the class change, the function of the zone may change too.

The Benefits of Establishing Zones in the Classroom

Sets out clear expectations for the students.

- How long the student will be in the zone.
- Who they are working with – by themselves, with other students, with the teacher.
- The type of learning that will happen in the zone – listening, interacting, writing, and experiential.
- The noise level for the learning – whisper, inside voice.
- The physical comfort for the learning – choice of sitting at the table, lying on tummy, crisscross sitting.

Develops executive functioning skills with more opportunities for in class transitions.

Supports variability within the one learning environment.

Offers spaces within the classroom with less sensory stimuli to reduce distraction.

Lessons are easier to differentiate if they take place in different zones.

When students can anticipate that the next lesson will take place in another zone, it can expand their capacity to attend and focus on the current lesson.

Helps students to regulate energy levels. Changing location and moving between zones splits up the school day, providing functional movement breaks.

Examples of Classroom Zones



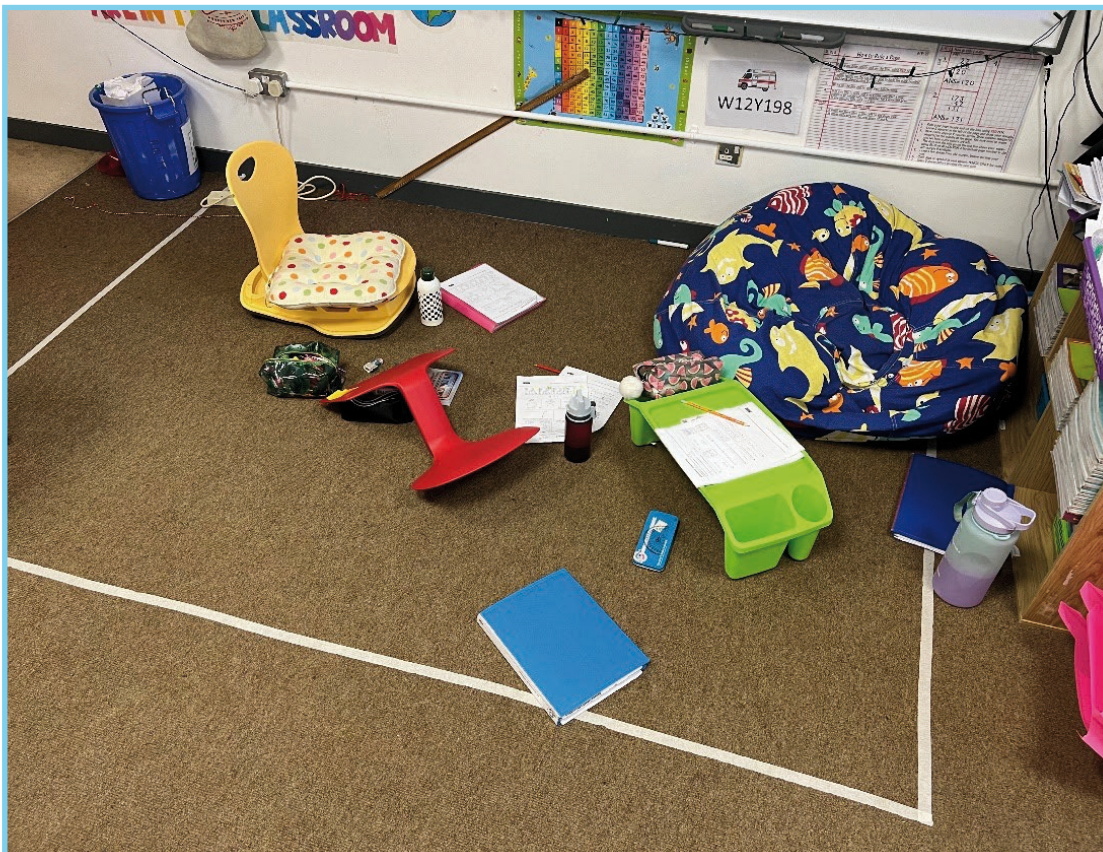
Library/Reading corner in a primary classroom



Chill space in a post primary classroom



Group work, instruction and individual work zones in a post primary classroom



Floor work area in a primary classroom



Quiet desk zones, instruction table and group work zone in a special classroom

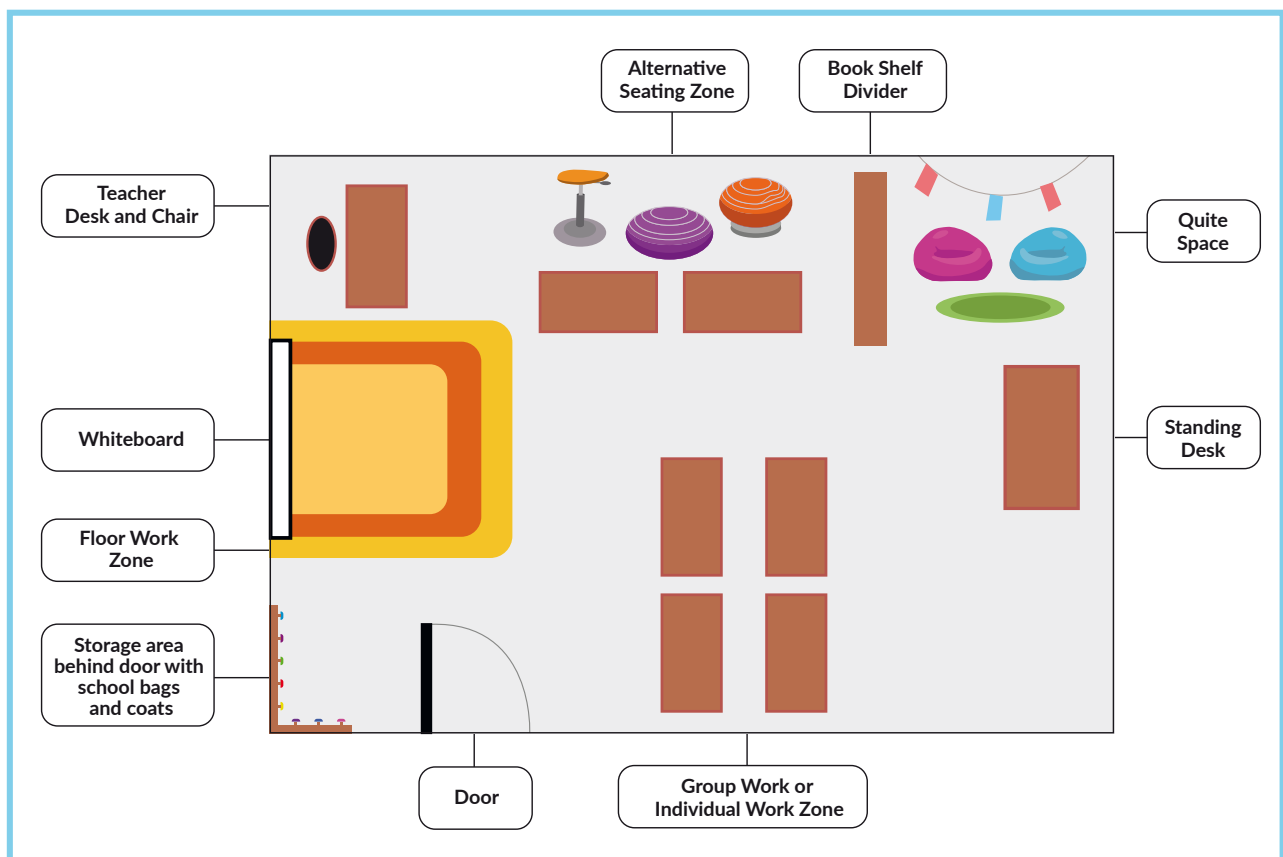
How Can I Zone My Classroom?

Step 1: Choose the zone(s) you wish to create

- Name of the zone.
- Agree when students will access the zone.
- How it will support their learning goals.

Step 2: Reconfigure the area for the zone, creating clear boundaries. This may involve:

- Repositioning classroom furniture, for example bookshelves.
- Using flexible items such as a partitions or portable whiteboards.
- Use colour like painting a section of the wall or placing coloured card on the wall in that space.
- Consider a change in floor covering like setting down a rug to create a defined segregated space.



Step 3: Create visuals to communicate the function of the zone and what is expected of the students when using the zone.



Zoned area for shared learning on the mat sectioned off by the different coloured bean bags and the blue rug.

Step 4:

Introduce the new zone to the class. Explain how to use the zone through the new visuals and by modelling.

Step 5:

After a period of time, reflect on how the students are engaging with the new zone(s). Refer to Section 1 on Student Voice to support you with ideas on how to reflect on the effectiveness of the zone to date with your students.

Step 6:

Make changes and repeat as necessary. The classroom may not look the same all year round. It should always match the developing needs of your students. Our goal is for all students to be able to meaningfully participate in the learning environment.

Other Tips

- The **NCSE Sensory Spaces in Schools booklet** is a helpful tool for setting up quiet zones.
- Zoning can be used at an individual, small group and whole class level.
- A noise generating zone, for example a group work space is best positioned at a distance from a quiet zone like a calm corner (Shanker, 2019).
- The zones of the classroom should be incorporated into your visual schedule by using symbols that represent the expectations of the zones. It will support predictability, preparation and flexibility for smoother transitions between lessons.

Can They See What We Say?

'Visual supports' or 'visuals', includes using objects, photos, signs, symbols or pictures in a way that supports understanding, expression, social inclusion and participation. Using visual supports can support students' understanding of a task, what materials they will need to successfully participate in a task, their role within that task and what is coming next after that task is complete.

Visuals are for all ages and should be used in all classrooms and shared spaces in a variety of forms to support understanding and communication throughout the school day.

They could include:

- Whole class visual schedules.
- Individualised schedules.
- Visual timers.
- 'Clear expectation' posters or pictures.
- Labelling cupboards and zones.
- Choice boards.

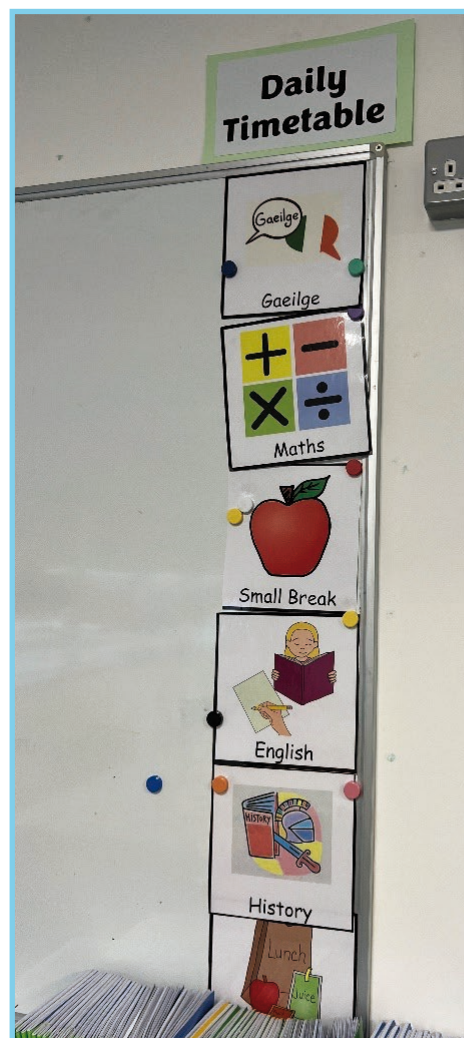


Using visual supports consistently increases predictability and significantly reduces the stress and cognitive load experienced by students. Therefore visuals support student regulation and capacity to attend to and participate in the task at hand. Consistent visual use also supports students to develop important executive functioning skills for independent learning such as:

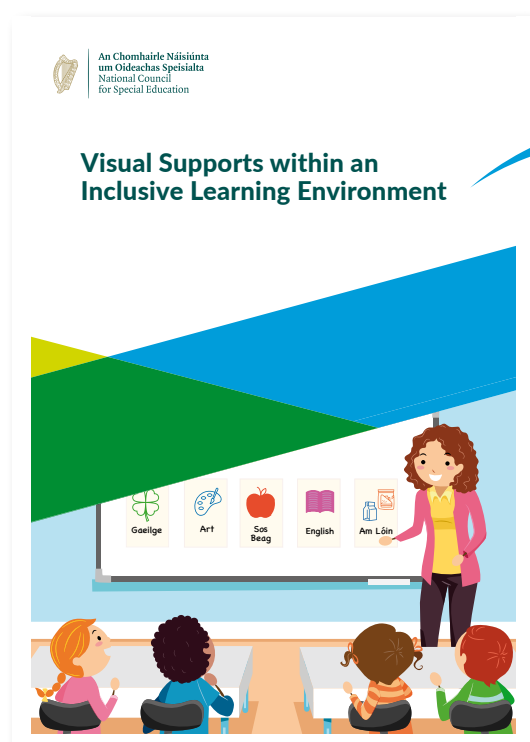
- Time-keeping.
- Planning and organising themselves.
- Managing their materials.
- Task initiation.
- Completing a multi-step sequenced task.

Visuals support ALL students. Research by Rutherford and colleagues (2020) has found that students without additional needs report using visual timetables as often as those with additional needs. Hence, the visuals we put in place for students with additional needs will also benefit students in classrooms more generally and should be used as a universal, whole-class strategy.

For more information on how to implement visuals effectively within your classroom, check out the NCSE's Visual Supports within an Inclusive Learning Environment.



Sample whole class visual schedule



Scan me to read



Storage of Materials

Consider the following areas to further support classroom organisation:

Smart Storage

Setting up a learning environment with order and structure:

- Reduces the visual complexity of the environment.
- Supports student capacity to concentrate and participate in learning.
- Creates systems that foster student organisational skills and independence.
- Creates opportunities to model systems of organisation.

Coats and Schoolbags

- Are there coat hooks for jackets and coats in the hallway or a designated space within the classroom?
- Do students have a designated cubby or locker to store their bags?
- Avoiding the storage of bags and coats under desks or on the backs of chairs helps to reduce visual clutter and increase the sense of space.

Books and Copies

Consistent modelling will be required to support students to independently engage with a system for organising books and copies.

- Are books and copies organised by subjects?
- Are the students' books organised in their locker/cubby with the spines facing out and stacked from largest to smallest?
- Do you use colour coding systems?
 - Colour coded stickers on the spines of books or,
 - Colour coded folders with all items for that subject in the folder.



Research indicates that off-task behaviour lasts 10% longer in heavily-decorated and disorganised classes (Fisher, Godwin and Seltman, 2014).



Designated area for coats and bags away from desks in a primary classroom



Use of colour coding and symbol matching with visual schedule on student copybooks to support independence and executive functioning skills

Resources and Classroom Tools

- Are everyday materials stored at a level that is accessible for all students?
- Do you use plastic boxes for storing materials? Transparent boxes can be useful for materials frequently used by students to support accessibility and independence as they will be easier to identify.
- Do you label storage boxes? Labelling boxes, drawers and presses using words and visuals will also support students to navigate the materials.
- Do you **colour code storage systems**? If you have lots of closed storage in your room (presses and drawers etc.) using a colour key can reduce the cognitive demand and help students to know what is stored where. For example, all the art supplies are in the storage with a red sticker, all the maths resources are in the presses or boxes with a yellow sticker.



Example of storage for materials using transparent boxes with picture and text visual supports

Section 4: Beyond the Desk

A flexible and adaptable classroom environment is one that offers students the opportunity to engage in a variety of work positions throughout the day. Implementing clear routines and expectations in combination with affording students the chance to learn in different positions and areas in their classroom:

- Supports you to gain an insight into when individual students are most regulated and motivated to learn.
- Supports students' own understanding of how they engage best in their learning.
- Supports students to discover their strengths and preferences.
- Facilitates students to be key agents of their own learning.



Multisensory Learning

Multisensory learning involves using multiple senses, such as sight, sound, touch, and movement to engage students in a holistic and immersive educational experience (Shams & Seitz, 2008). By incorporating various sensory modalities, students can enhance their understanding, retention and application of information through active engagement with the materials. Incorporating multi-sensory learning opportunities supports students with varying learning preferences to achieve and succeed.

Movement is an important method of multisensory learning for students of ALL ages.

Learning experiences that incorporate movement:

- Supports regulation of students' energy levels.
- Supports students to attend and participate in learning.
- Supports the sensory needs of learners with sensory differences.
- Increases motivation and interest.
- Increases physical activity and reduces time being sedentary.

This section will now explore how your classroom set-up can support the integration of movement into everyday learning.

Working on the Floor

Learning on the floor allows students to work in a number of different positions. Learning in these positions engages students' larger muscles and joints. This is fundamental to developing postural stability, shoulder stability, wrist and elbow control which are pre-cursors to the development of fine motor and handwriting skills. Stimulating the muscles and joints in this way can also support student regulation.

Working on the floor is not just beneficial for junior students. For older age groups, working on the floor creates more opportunity for students to shuffle their body and change positions a lot more freely compared to sitting in a chair. These micro-movements provide the body with sensorimotor input that supports regulation of arousal and attention.



Student Voice from 6th class student views of working on the floor

The area I chose was

The Floor and Standing Table

Why I chose this area?



Write/Draw



I like standing because you can move around a lot and you can still grab a chair if you want to sit.

The floor is really comfortable and I like the chairs and desk in it.

I like how I can move my legs around with this chair.

I love the combination of the bean bag and green or red desk.

You can introduce opportunities for your students to work on the floor by:

- Setting up a rug or a large carpet in your classroom. This creates a sectioned zone within the learning space. Opportunities for learning to take place in this zone will then be possible without needing to move furniture.
- Developing your students' awareness of all the different positions to work in. This will require you to model the choice of positions and how to sit in them correctly. Visual representations for choice of sitting positions is also recommended to support independence.



Tummy lying



Criss-cross



Feet in front



Kneeling on heels



Mermaid position



Lying on back

If your classroom is too small to permanently have a rug laid out, try using items such as carpet samples or individual place mats as markers for your students to utilise the floor space available.

If completing work in books, copybooks or worksheets, including a number of options for floor desks to provide further choice for your students to work on the floor but with a solid surface for writing. This may include using a floor desk or a lap desk.

Lever arch folders, clipboards or individual white boards can also be used to facilitate student engagement in pen/paper tasks whilst on the floor.



Lap Desk



Floor Surfer Desk



Clipboard

Using Other Surfaces

Making use of all surface areas within a classroom is a resourceful way to create opportunities for students to learn in different body positions.

Hare et al. (2016) discussed 'Pushing vs Pulling', explaining that notice boards and interactive whiteboards are usually used as a means for students to absorb the information – the information being pushed onto the students. Reserving space on your white boards, notice boards and walls can be an effective approach for setting up the space to pull information out from your students. Ideas for how alternative learning surfaces can be used to support students to demonstrate and showcase may include:

- Sticking worksheets on the walls, transforming the walls into an easel.
- Using the window sills as a standing desk.





- Inviting students to lie on their back under their desks with their worksheet stuck to the underside of the desk. This provides opportunities to develop shoulder stability and fine motor control.
- Using surfaces like flipcharts, easels and whiteboards, increases the opportunities for student collaboration, adds a 'fun factor' to the activity, making the experience more memorable.
- Table risers can be a very useful low cost resource to support creation of a standing work surfaces in your classroom.



Standing desks created by using table risers to increase the height of the desks

Active Seating

Providing your students with a diverse range of seating options empowers them to choose what works best for them. Research from the American Occupational Therapy Association (2015) highlights that in many classrooms, teachers are already providing alternatives to traditional seating as a strategy to help students better attend and participate in learning.

There is a wide array of active seating options available such as:



Wobble stools



Stability balls and bases



Ergo stools



Peanut balls



Donut balls



Perch stools



Stability balls with bases set up at a round table



Depending on the students' choice of seating, they may be able to rock, wobble, bounce or adopt an alternative posture while engaging in learning. If you are interested in introducing active seating in your classroom, please ensure careful consideration of the following factors:

- Set clear expectations for how active seating options will be used in your classroom.
- Active seating to be used as a tool and not a toy or a reward.
- Use consistent modelling and demonstration of the set up and use of active seating options.
- Consider the environment, ensure it is clear and free from obstacles.
- Consider the physical requirements of the learning. Do students need a stable base or a hard surface to lean on?
- Use invitational language and offer choice. Never force a student.

When using active seating equipment, for example peanut balls or wobble stools:

- It's recommended to only use for short periods throughout the day (maximum 20 minutes at a time).
- Ensure the seat is the correct size for the student (feet are flat on the floor).
- Ensure the equipment is purchased from reputable suppliers and checked regularly.
- Ensure the student has the physical capability to use the equipment.

One size does not fit all so:

- Invite students to share their feedback – How did your body feel? Do you think it helped your brain to learn? Would you like to use it again?
- Observe students' responses – consider the impact on student learning, enjoyment, motivation, interest, choice etc.

Active seating should be used as a whole class universal classroom support. It is recommended that all students are welcome to engage with the items, as opposed to their traditional purpose of being 'prescribed' to an individual student.

My thoughts and feelings on the changes to my classroom

How do you feel about the changes to your classroom?

Circle the picture



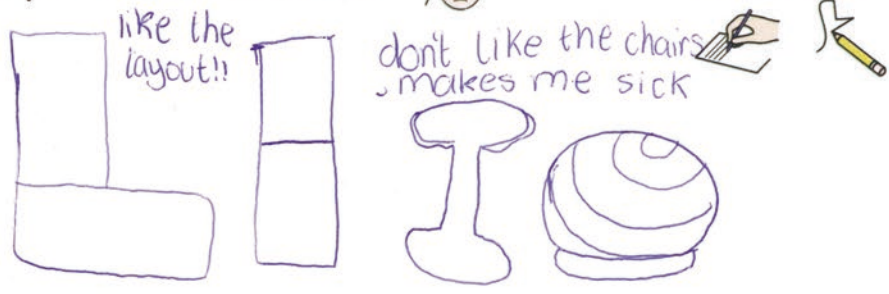
Why did you pick this answer?

I'm in the middle with this, I have travel sickness, so when I sit on the wobbly chairs I get quite sick, (that's just me though!) I do like being able to move beside different people, but I'd rather the books be always with us, I don't like how we have to get up every time we need a book! But other people love this, and I think this is a great idea, just maybe not for me!

Go to your favourite area of the classroom/ where you work best... and WAIT

The area I chose was My desk

Why I chose this area?



I can't stay still, I always find something to fidget with, so I do like this, it's nice to get a ~~break~~ break from the boring 4 tables, squares/rectangles, over all I like it because you can choose to sit on a normal seat or a Hokki or a yoga ball!

Conclusion

What are the key messages to remember?

Universal supports:

- What is essential for some is beneficial for all.
- Just like universal design, this booklet provides whole class strategies and ideas that will support the participation of students of all ages.

Honouring student choice and voice:

- Recognise that your students have a role as collaborative partners in designing and using the space.
- Seek feedback and support students to recognise how and where they best learn. This will empower students to make informed choices and have a sense of ownership and belonging in their classroom.

Less is more:

- Clear wall space and value 'white space' to create flexible work spaces and sensory friendly environments.
- Reduce clutter by zoning a space in the classroom or outside of the classroom for coats and bags.

Keep it flexible:

- See your classroom environment as a space that can be adapted and changed to accommodate the needs of the students and the learning goals at that time.
- Get creative about how you can maximise the potential of your space to offer dynamic and rich multi-sensory ways to experience learning.

"Keep an open dialogue with your class regarding their preferences. Include them in your plans to adapt routines to make the changes more effective and best suited to the class needs".

Advice from teacher who implemented changes to their classroom environment.



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Relevant Resources

CAST: Universal Design for Learning <https://udlguidelines.cast.org/>

Clever Classrooms: Summary report of the HEAD Project
<https://www.cleverclassroomsdesign.co.uk/>

Department of Education: School Design Guide. Primary & Post Primary School Specialist Accommodation for Pupils with Special Educational Needs
<https://assets.gov.ie/133140/317eda8c-abc8-4915-8da1-c9c336be82a9.pdf>

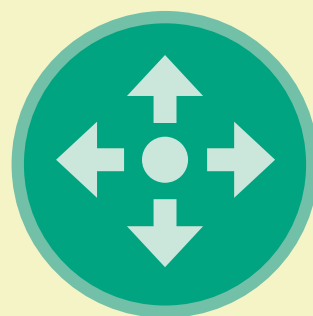
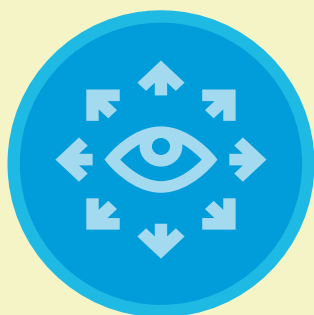
National Disability Authority guidelines <https://nda.ie/>

Centre for Excellence in Universal Design <https://universaldesign.ie/>



An Chomhairle Náisiúnta
um Oideachas Speisialta
National Council
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Classroom Sensory Screening Tool





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This screening tool was developed by National Council for Special Education (NCSE) Occupational Therapists working in collaboration with NCSE Speech and Language Therapy and Advisor colleagues.

The content of this screening tool is based on research and practice based evidence from working in schools.

This tool can be used by any teacher working across primary, post primary and special school settings.

Classroom Sensory Screening Tool

The sensory qualities of our classrooms have a direct influence on student participation and learning. Learning spaces that have too much or too little sensory stimulation can serve as a barrier to student energy regulation, attention and readiness to engage in learning. Students have differences in how they process their sensory world and for many, the classroom can be a very busy and overwhelming place.

Conducting a sensory audit of your room can support you to think about your space from a sensory lens and identify:

- What elements of your classroom are working well.
- What practical steps you can take to help create a more sensory comfortable classroom for all students.

When Completing a Classroom Sensory Audit:

- Invite a colleague to support you in assessing the sensory qualities of your room.
- Consider how you will capture students' voice in relation to their experience of your classroom environment. See Page 6 of **The Physical Classroom Environment booklet** for ideas.
- Conduct a sensory audit of your space regularly. Spaces change and students' needs change.
- Please refer to the booklet **The Physical Classroom Environment** when conducting this audit for more information and ideas around creating sensory comfortable classrooms.



Good Practice Statements To Consider



Classroom Lighting

- Artificial light is used only where necessary.
- Fluorescent lights are checked and changed regularly (to avoid flickering).
- Flickering light coming in through blinds is minimised.
- Position reflective surfaces like whiteboards to minimise reflection/glare.
- Monitor position of sunlight shining in when sun is low.
- Avoid putting displays and posters on windows.

Wall Colours

Colours in the classroom can be over or under stimulating:

- Lots of bright colour on the walls, such as red or orange, may be over-stimulating.
- Plain white walls with little colour features may be under-stimulating.
- A calm backdrop with additional colour elements helps to create an optimal level of stimulation. Some examples of how to apply this include using colours on furniture, soft furnishings, wall displays and notice boards.
- Different wall colours can differentiate zones within the classroom. For example, a corner of the room painted pale blue stages the calm corner area.

What are we doing well?

What could we do to increase the sensory comfort?

Good Practice Statements To Consider



Visual Organisation

- Visual displays are clear, organised and designated to bounded spaces in the room.
- Art and decorations are displayed in a designated space like on a bulletin board. These are updated regularly.
- Wall space is clear. Recommend a minimum 20-50% of wall space be kept clear (Barret et al., 2015).
- Key information is visible from all seating areas in the classroom. For example, class expectations and visual schedules.
- Whole class visual schedules are minimum A5 or A4 size for each subject.
- To reduce visual clutter, use closed storage for occasional materials and resources.
- The classroom is structured into designated zones for specific activities to give clarity to environmental organisation. Examples of zones include calm space, reading corner or floor work zone.
- The teachers' desk and area is kept organised and clear of clutter.
- If possible, student bags and coats are kept in a segregated area of the classroom to increase visual calm and organisation.

Seating Plan

- Involve students in the process of identifying a learning space or seating plan that works best for them.
- Provide a variety of workstations such as standing desks, group work desk or individual work desk.
- An individual work desk in a less stimulating area of the classroom may benefit some students to maintain attention and concentration at specific times. This could include having privacy boards or any other visual boundary.

What are we doing well?

What could we do to increase the sensory comfort?

Good Practice Statements To Consider



Noise Inside the Classroom

- Sounds from classroom equipment (TV, audio systems, computers) are:
 - At an appropriate volume level.
 - Switched off when not in use.
- Adults are aware of their own voice volume and pitch.
- Make sounds predictable through the use of clear routines, schedules and social stories.
- A voice modulation chart can communicate clear expectations for noise levels in the classroom.
- An alternative quiet learning space is available in the classroom.
- Access to calming tools can support students to regulate and manage uncomfortable sensory experiences.
- Noise created from the movement of furniture and of people can be dampened by using carpet floor surfaces, protector pads on chair/table legs and encouraging students to lift their chairs.
- Classroom is fitted with soft furnishings to absorb sound vibrations. This may include acoustic panels, floor mats or felt notice boards.

What are we doing well?

What could we do to increase the sensory comfort?



Good Practice Statements To Consider

Noise Outside the Classroom

- Consider the volume/pitch of the school bell/intercom. Invite students to comment on their sensory comfort with the volume.
- Windows are closed when necessary to avoid outside noise. For example, from lawn mowers or other students playing.
- The acoustics of the gym, canteen and corridors are checked and modified. Use of soft furnishings and installing acoustic panels absorb sound to control noise and can reduce echo.

Loud Noises

- Where possible, students are told in advance if a loud noise or alarm is going to sound.
- A quiet space is available for students who experience auditory sensory discomfort.

Music

- Using music in the classroom can create a regulated atmosphere.
- Music can be used at the beginning of class, during group work or transitioning between activities.
- For some students, music may be distracting or overwhelming. Determine when music may be helpful for all students by involving them in the decision making.

What are we doing well?

What could we do to increase the sensory comfort?

Good Practice Statements To Consider



Within the Classroom

- Students who experience intense sensory responses to touch are provided with seating options away from high traffic areas to minimise the risk of other students bumping into them.
- Visuals are used to clarify boundaries for personal space where appropriate. For example, use carpet samples or cushions during floor time.
- There is a clear system for queuing and waiting. Some students may prefer to be at the front or the back of the line so they only have one person beside them.

Corridor Movements

- There are systems in place in corridors to reduce the risk of students bumping into each other. For example, one way system, walk on the left.

Fidget Items

- Fidget items are available to students who require input to attend and focus.
- An under the table policy for fidgets may support students who wish to access the fidgets whilst also minimising distractions for other students who choose not to access them.

Temperature

- A comfortable classroom temperature is maintained.
- It is recommended that the heating system should maintain a minimum temperature of 18 degrees°C in classrooms (where there is an average level of clothing and activity – www.into.ie).

What are we doing well?

What could we do to increase the sensory comfort?

Good Practice Statements To Consider



Smells Within the Classroom

- Odours from paints, glues and cleaning fluids are minimised.
- Student may experience intense sensory responses to everyday smells in the classroom. For instance perfumes or food. Ventilating the room by opening windows is advised.
- Calming or alerting scents that come from oils or essences should be researched and only introduced gradually, with feedback from students.

Smells Outside the Classroom

- The impact of odours from the canteen and practical rooms. For example, (home economics or woodwork room) is considered.
- The impact of odours from toilets/changing rooms is minimised.

What are we doing well?

What could we do to increase the sensory comfort?

Good Practice Statements To Consider



Regular Movement Opportunities Within the Classroom

- Academic infused movement is incorporated into the classroom where possible to support student regulation and engagement in learning. This involves adapting a learning activity so that it can be facilitated through movement. For example, a walking debate or sensory story.
- Students are facilitated to complete tasks in different positions. Examples include standing, kneeling or on their tummies on the floor instead of sitting on their chairs.
- Alternative seating options are available for students to choose.

What are we doing well?

What could we do to increase the sensory comfort?

Additional Information

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Notes

Notes



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