

InterActivity 2023

Overloaded: Sensory Integration and Inclusion for All!

Moderated by: Sommer Murphy: Museum of Discovery

Presenters:

Erin Neuman: Science City, Union Station Kansas City (chair)
Sarah Iannotti: Orlando Science Center
Brittney Kugler Reynolds: Museum of Discovery
Janis Benton: San Diego Children's Discovery Center

During The Panel: Housekeeping

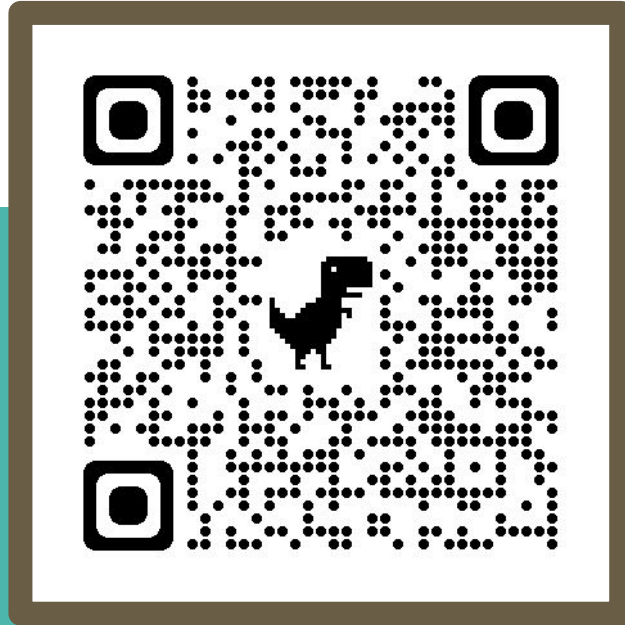
Be Kind and Respectful and
Take Care of Yourself

- Cell Phones
 - Restrooms
 - Water
 - Handouts
 - Manipulatives
 - Q&A
 - Feedback Forms
-

Learning Outcomes for Session

- Understand basics of sensory processing and integration
- Examine and evaluate various manipulatives and fidget devices
- Compare and contrast ways to adapt, modify, and/or integrate for sensory inclusion


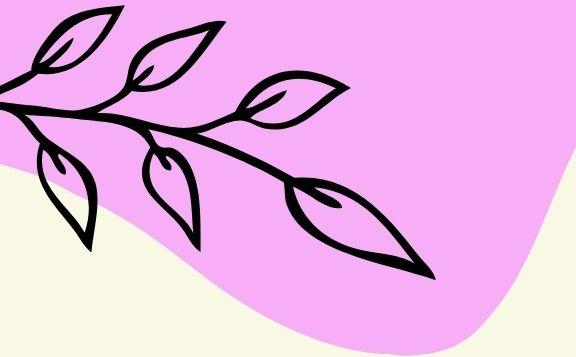
**For Resources and More Information
Scan the QR Code:**



Listen and Write!

List All the Different Sounds
You Hear





SENSORY INTEGRATION

WHAT IS IT AND WHY DOES IT MATTER?

Presented by: Erin Neuman
Science City at Union Station KC



DISCLAIMER

- This presentation is for information purposes only!
- we are not licensed to give medical advice or diagnoses concerning sensory integration.

WHAT IS SENSORY INTEGRATION?

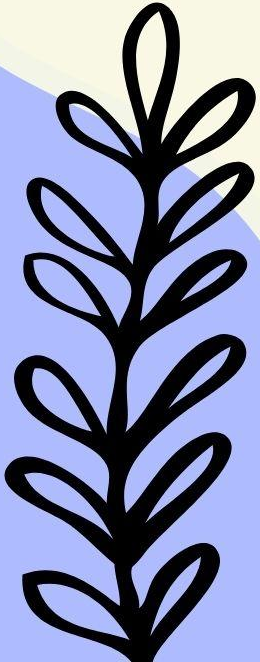
The term “sensory integration” refers to the processing, integration, and organization of sensory information from the body and the environment.

It is how we experience, interpret and react to (or ignore) information coming from our senses.



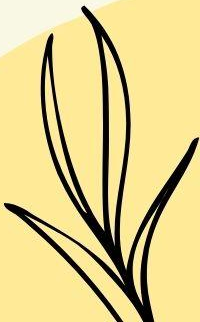
OUR 8 SENSES

- Sight (vision)
- Hearing (auditory system)
- Touch (tactile system)
- Taste (gustatory system)
- Smell (olfactory system)
- Proprioception (senses of body awareness and position)
- Vestibular (awareness of movement, balance, and coordination)
- Interoception (our internal sensory system that tells us what is happening inside our body, such as... hunger, bathroom, tiredness, emotions, etc)



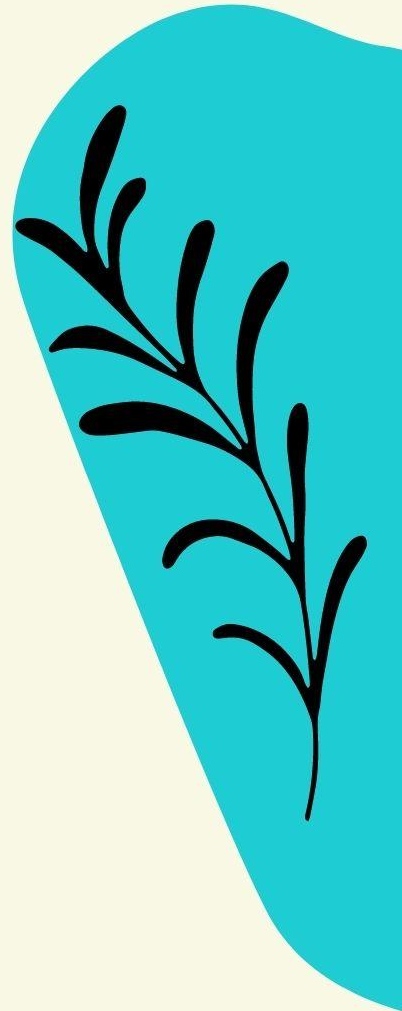
A NOTE ON DEVELOPMENT

- The development of sensory integration occurs when we are young.
- It is part of our normal development-such as rolling, crawling, walking, and play.
- For some, sensory integration is less well developed or develops atypical.



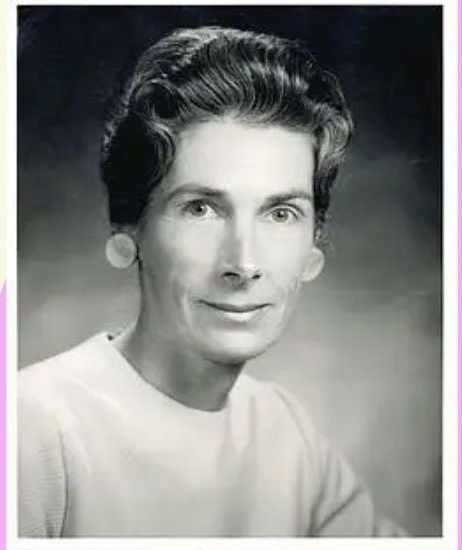
SENSORY INTEGRATION VS. SENSORY PROCESSING?

- both refer to the processes in the brain that allow us to take the signals from our senses, make sense of those signals and respond appropriately.
- Therapists and authors tend to use a particular term depending on where they trained.



WHO DEVELOPED THE THE CONCEPT?

- The concept of sensory integration was first developed and described by Dr A Jean Ayres in the 1970s.
- Dr Lucy Miller published a model of “sensory processing disorder” in 2006 based on Ayres Sensory Integration.
- Dr. Winne Dunn further developed a model of four patterns of sensory processing in 2007.

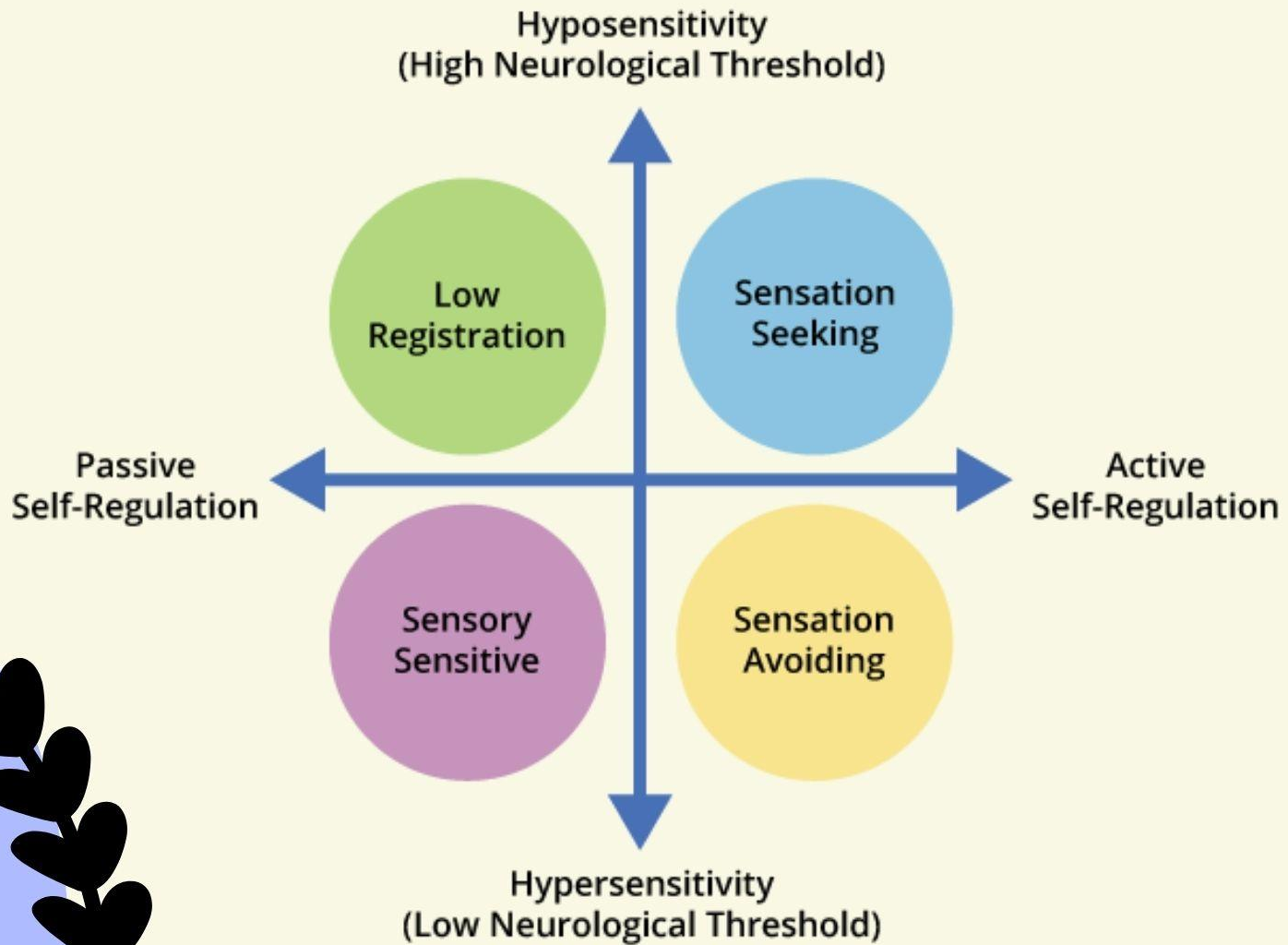


Dr A Jean Ayres. 1972, photo credit: by family member (personal photo) GFDL, via Wikimedia Commons.



FOUR PATTERNS OF PROCESSING

The Dunn's Model of Sensory Processing proposes four basic patterns of sensory processing which are emerged from the interaction of the neurological threshold and self-regulation.



- **Neurological threshold**- a personal range of threshold for noticing and responding to different sensory events in everyday life.
- **Low sensory threshold**- notice and respond to stimuli more (neurological system activates easier and more readily).
- **High sensory threshold**- often miss stimuli (neurological system requires stronger stimuli to activate).
- **Self-regulation**-a continuum of behavioral construct.
- **Passive strategy**-remaining in place
- **Active strategy**- adjusting one's position





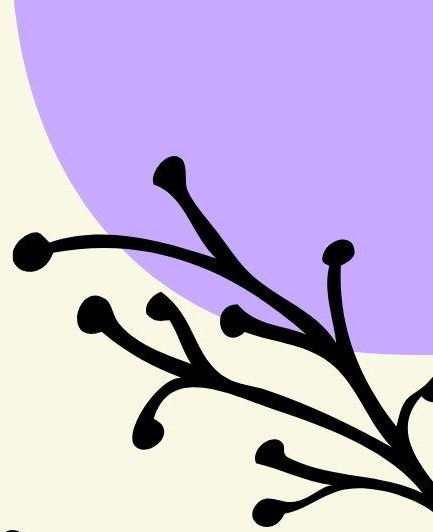
A NOTE ON THIS MODEL

Individuals with extreme responses to a sensory event are likely to have interfered daily life.

This model provides assessment and intervention strategies for therapists and other professionals.

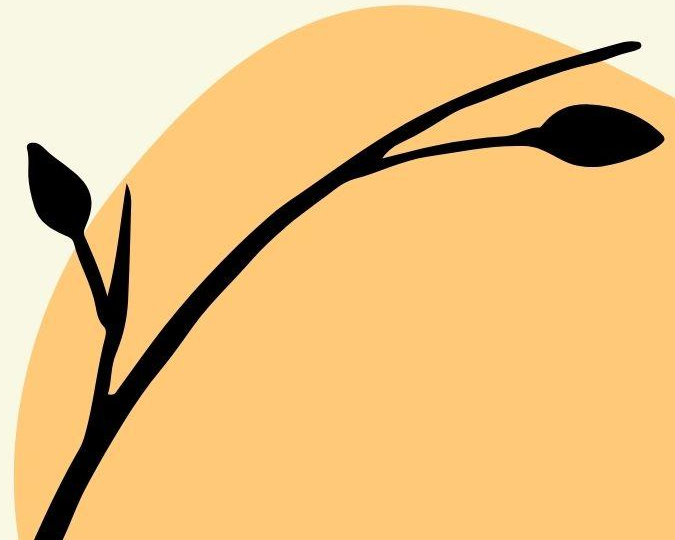
FOSTER A NEURODIVERSITY INCLUSIVE ENVIRONMENT

- Neurodiversity refers to the concept that certain developmental disorders are normal variations in the brain.
- May refer to: ADHD, Autism, Dyslexia, and Other Learning Disabilities
- There are many types of disability and neurodiversity. Even within a subgroup, remember everyone is an individual.
- Always Presume Competence!



GOLDEN RULE OF NEURODIVERSITY

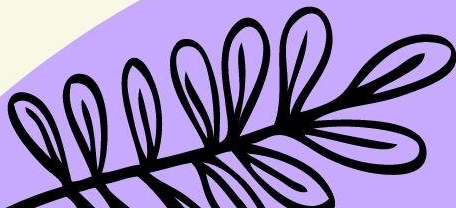
Nick Walker's Golden Rule of Neurodiversity: Respect the bodily, sensory, and cognitive needs of others as you would want your own to be respected, whether or not you understand the reasons for those needs



SENSORY IS FOR EVERYONE!

Putting together information from our eight senses allows us to participate in everyday activities. By integrating, or combining all the information we get from our senses, we make sense of the world around us and successfully move through and interact in our environment!

Everyone has different sensory needs and their neurological threshold and self regulation can impact those needs.



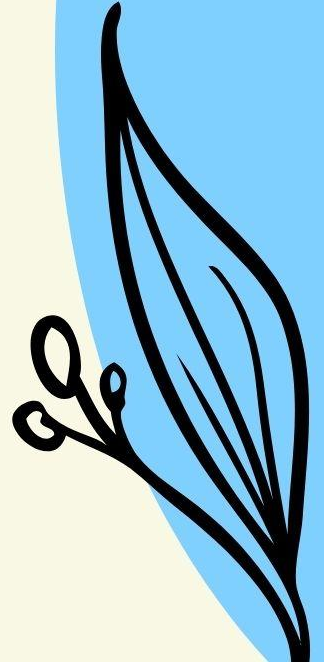
WAYS TO INTRODUCE (OR LESSEN) SENSORY INPUT



- Play-dough
- Putty/Slime
- Sand
- Water
- Scent Jars
- Finger Paint
- Cooking
- Squeezing
- Swinging
- Movement Breaks
- Dancing
- Tunnels
- Headphones
- Sunglasses
- Quiet spaces
- Giving options
- Prepare for transitions
- And more!

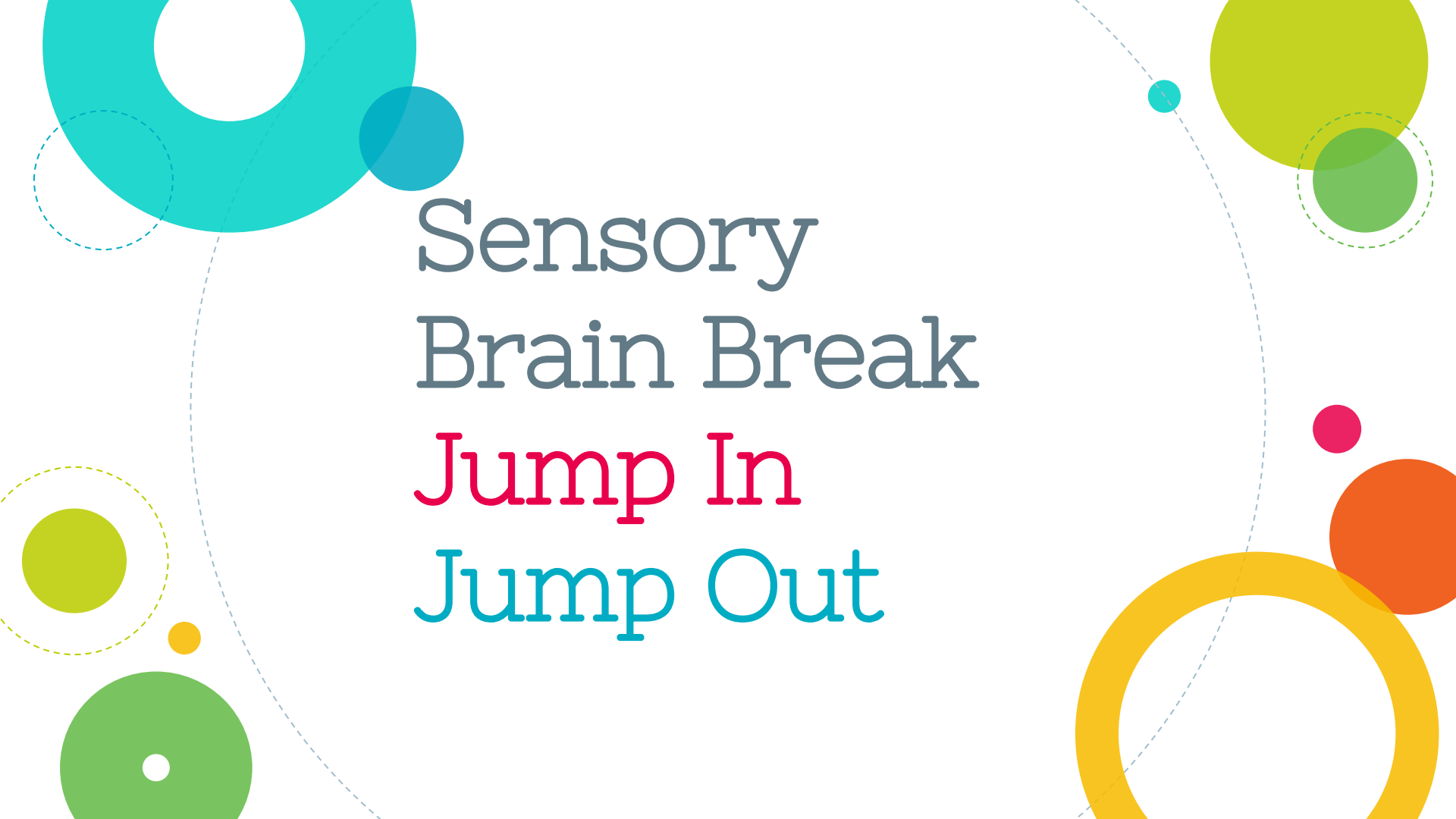
SOURCES AND REFERENCES

- Ayres, A. J., Robbins, J., & McAtee, S. (2018). Sensory integration and the child: Understanding hidden sensory challenges. Western Psychological Services.
- Dunn, W. (2007). Supporting children to participate successfully in everyday life by using sensory processing knowledge. *Infant and Young Children*, 20, 84-101
- Sensory integration education. (n.d.). Retrieved April 01, 2023, from <https://www.sensoryintegrationeducation.com/>
- Walker, N. (2021). *Neuroqueer heresies: Notes on the neurodiversity paradigm, autistic empowerment, and postnormal possibilities*. Autonomous Press.





THANK YOU

A decorative graphic featuring a white background with a large, faint dashed line forming a wide, shallow curve. Various colorful circles and rings are scattered around the text. In the top left, there is a large teal ring and a smaller teal circle. In the top right, there is a large lime green circle and a smaller green circle. In the bottom left, there is a large green circle with a white dot in the center, a smaller yellow circle, and a dashed yellow circle containing a lime green circle. In the bottom right, there is a large yellow ring, a smaller orange circle, and a small pink circle.

Sensory
Brain Break
Jump In
Jump Out

Instructions



Get into a large circle with enough room to move in front of you and behind you.

Instructions

If you **agree** with the
described scenario
jump IN



Instructions



If you **disagree** with
the described
scenario jump **OUT**
of the circle



1

I enjoy being close to people who
wear perfume or cologne

Jump In or **Jump Out**
(agree) (disagree)

The background features several decorative elements: a large orange ring with a dashed white inner circle in the top left; a large teal ring with a white inner circle in the bottom right; a large teal number '2' inside a dashed light blue circle in the top center; and various smaller solid and dashed circles in green, yellow, pink, and teal scattered throughout.

2

**I avoid elevators and/or escalators
because I dislike the movement.**

Jump In or Jump Out

The background is white with various colorful circles and dashed lines. In the top left, there is a large orange circle with a dashed white outline, overlapping a yellow circle and a pink circle. In the top right, there is a green circle with a white dot, a yellow circle, and a green circle with a dashed white outline. In the bottom left, there is a green circle with a dashed white outline, a yellow circle, and a small cyan circle. In the bottom right, there is a large cyan circle with a white dot, a cyan circle with a dashed white outline, and a small cyan circle. In the center, there is a large dashed light blue circle containing the number 3.

3

I keep the shades down during the day when I am at home.

Jump In or **Jump Out**

The background features several overlapping circles in various colors: orange, yellow, pink, green, and teal. Some circles are solid, while others are dashed. A large teal number '4' is centered within a large dashed circle.

4

I don't like particular food textures
(ie: peaches with skin, cottage
cheese, chunky peanut butter).

Jump In or **Jump Out**

The background is white with several decorative elements: a large orange ring with a dashed white inner circle in the top left; a large light blue dashed circle in the top center containing the number 5; a green circle with a white dot in the top right; a yellow circle and a pink dot in the middle left; a green dashed circle and a small cyan dot in the bottom left; a large cyan ring in the bottom right; and a cyan dashed circle with a cyan dot in the bottom right.

5

It takes me more time than other people to wake up in the morning.

Jump In or **Jump Out**

The background features several decorative elements: a large orange ring with a dashed white inner circle in the top left; a large cyan ring in the bottom right; a large cyan number '6' inside a dashed light blue circle in the top center; and various smaller solid and dashed circles in green, yellow, pink, and cyan scattered throughout.

6

**I find it difficult to work with
background noise (ie: fan, radio, etc.)**

Jump In or Jump Out



A Museum For All

Museum of Discovery
Little Rock, Arkansas





Inclusive and Fun for Everyone

- Tinkerfest and sensory overload
- Portable, pop up experience available for festival settings
- Community Partners
- Arkansas Autism Foundation, Arkansas Autism Resource & Outreach Center
- Sensory Friendly Tent
 - Designed as a space for decompression and sensory inclusivity
 - Sensory tools & manipulatives and sensory exhiblettes



.....

Sensory Station



For some individuals, going to events can be overwhelming due to sensory overload. The Sensory Station offers simple modifications to help create an accepting and inclusive environment for everyone.

If you or a loved one has a sensory need, please visit the Sensory Station or ask us for more information!

Sensory Tent Materials

- Liquid floor tiles
- Sunglasses
- Gloves
- Compression body socks
- Fidgets
- Light cubes
- Headphones
- Fans
- Foam cushions
- Grounding tools



Sensory Exhiblettes

- Built “in house”
- Zand-garten
- Noodle Wall
- Peddle Lights
- Light & Shadow Table



What about everyday inclusivity?

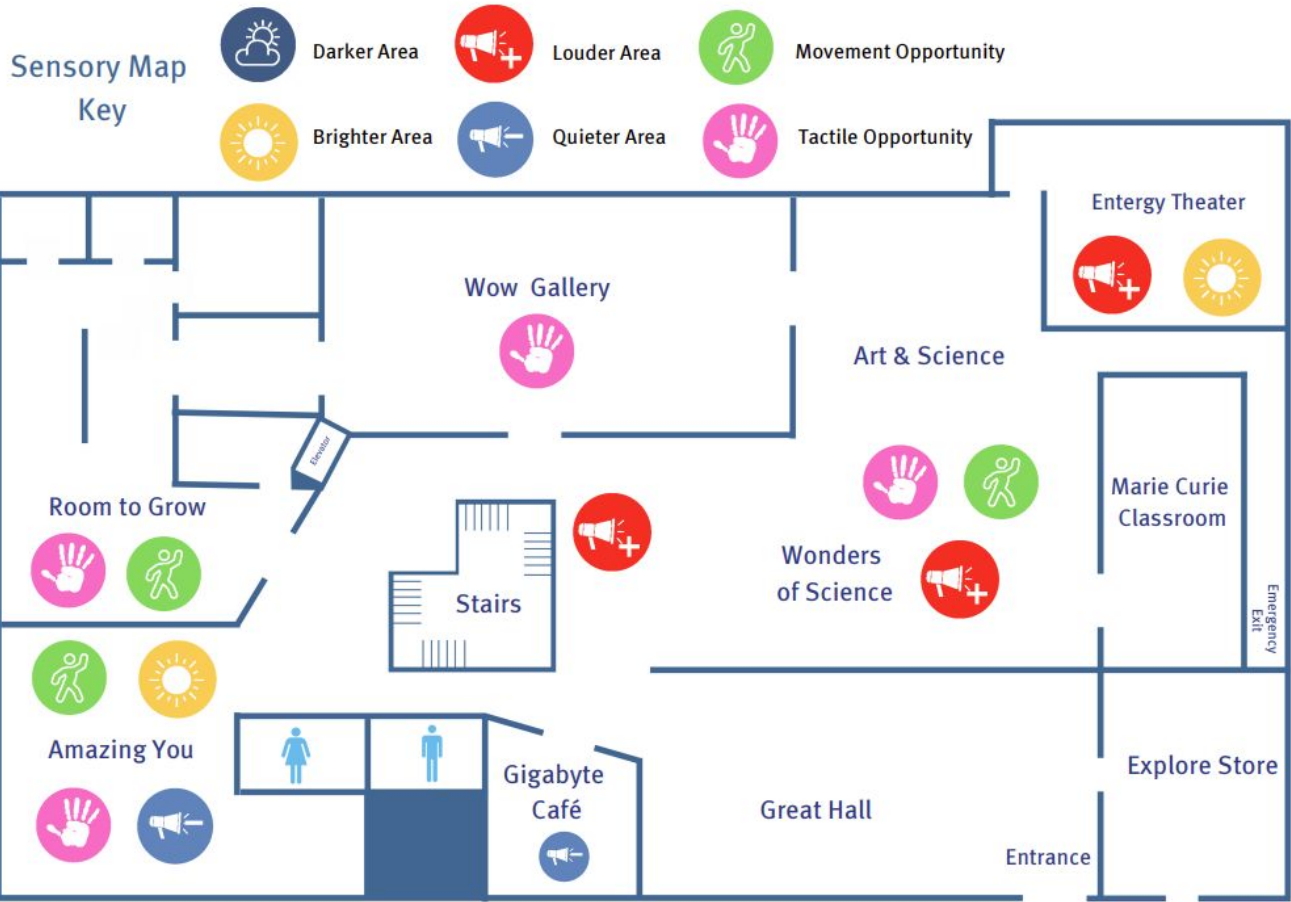
- Making the museum more accessible on a smaller scale
- Sensory Backpacks
 - Available to check out at the admissions desk
- Each backpack includes
 - Sunglasses
 - Gloves
 - Grounding tools
 - Post it notes
 - Headphones





Move to a Museum for All

- Began partnership with University of Central Arkansas graduate student
- Museum Assessment
- Changes at MOD:
 - Staff-wide training
 - Began quarterly Sensory Friendly Sundays
 - Accessibility information on our website
 - Sensory Map
 - Museum Social Narrative
 - Plan for permanent Sensory Friendly space (Sensory Cove)



Upstairs



Museum Social Story

- Preparing for visits to the museum
- <https://museumofdiscovery.org/wp-content/uploads/2022/07/Updated-Social-Narrative.pdf>

Question Toss

What does your museum do
or can do to make a
“museum for all?”

- Catch the ball!
 - Answer the question!
 - Toss the ball to someone
-



ORLANDO SCIENCE CENTER

Pop-Up Quiet Rooms

Sarah Iannotti – Manager of KidsTown at the Orlando Science Center



Goals

- Share OSC's quiet room process
- Encourage you to get started, regardless of resources
- Get you thinking creatively about supplies and materials

What is a quiet room?

Generally, a quiet room is a space intentionally set aside to be used to take a break from an otherwise very stimulating environment.



Getting Started: Challenges

We could see that there was a need to add a quiet space for guests to take a break from the busy museum, but...

- We didn't have a budget.
- We didn't have a permanent space for this offering to live.
- We didn't have anyone with specific expertise.

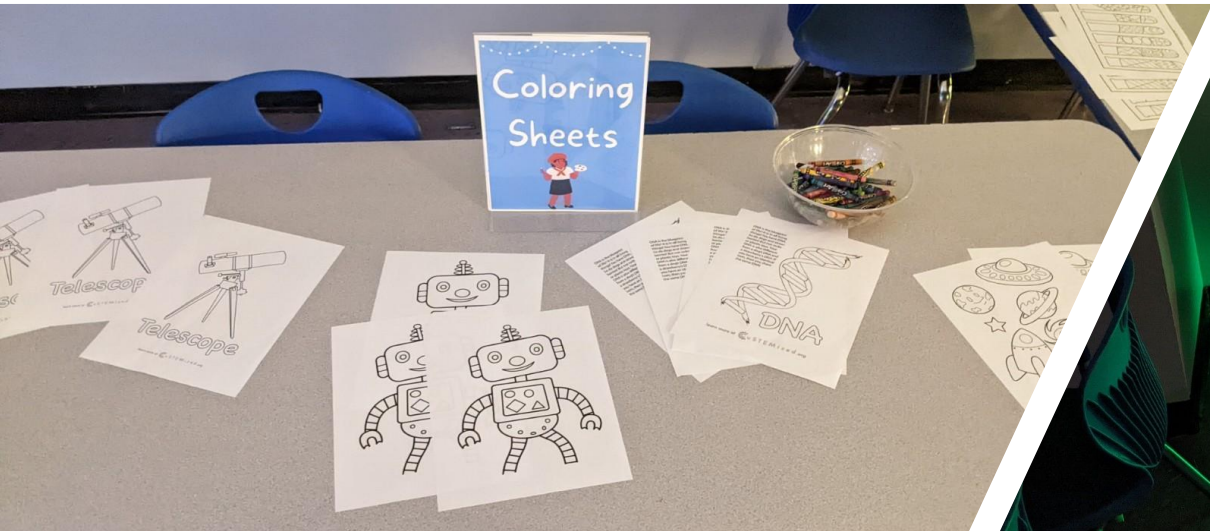
What's in OSC's Pop-Up Quiet Room?





No Budget? Get Creative With Supplies!

- We got grant funds to do double duty.
- We borrowed from our Events team.
- We borrowed from our Exhibits team.
- We borrowed from ourselves!



No Permanent Space? Try Flexible Setups!



No Expertise? There's Value in Getting Started!



- It allows staff and guests to see the value and potential of a space like this.
- You can't get guest feedback unless you get started!

Collecting Feedback

Quiet Room Experience Survey

Today's Date: _____

1. Are you a member?

Yes No

2. Please list the ages of those in your party utilizing the Quiet Room:

3. Overall, how was your experience in the Quiet Room?

Poor Fair Good Excellent Superior

4. How did you hear about the Quiet Room?

Program schedule Wayfinding sign
 Have attended before and looked for it Other (please specify): _____

5. Is there anything we can do to improve the Quiet Room?





Remember...

- **No budget?** Get creative with your materials and how you source them!
- **No location?** Stay flexible and try out different spaces!
- **No expertise?** Do your best, get started, and seek feedback!



ORLANDO SCIENCE CENTER

Thank you!

Manipulative Exploration

Look, Touch and Play with the
items on your table and
around you!

- What do they feel like?
 - What can you make them do?
 - How do they make you feel?
-



Sensory Friendly Mornings

San Diego Children's Discovery Museum





Visual Activity Card

- We created the Visual Activity Card to help our non verbal guests be able to navigate the museum.
- It's a visual representation of what is inside the museum.
- Starting from when they walk into our doors to all of our exhibits.
- As we change exhibits, we are also able to update them





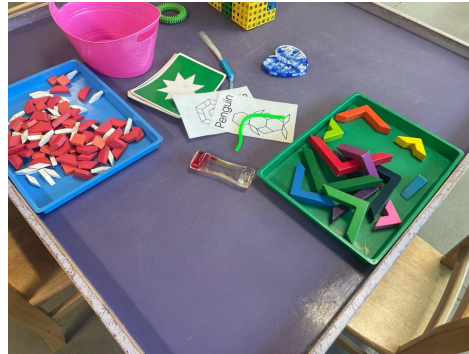
Visual Story

- Museum Visual Story
- <http://online.sdcdm.org/wp-content/uploads/2023/02/Social-Story-Final.pdf>
 - A Step by Step guide for a visit with the museum
 - Prepares them for what is inside and what can happen even before they come in



Manipulatives

- Puzzles
- Fidgets
- Weighted Blankets
- Sensory Swing





Sensory Bags

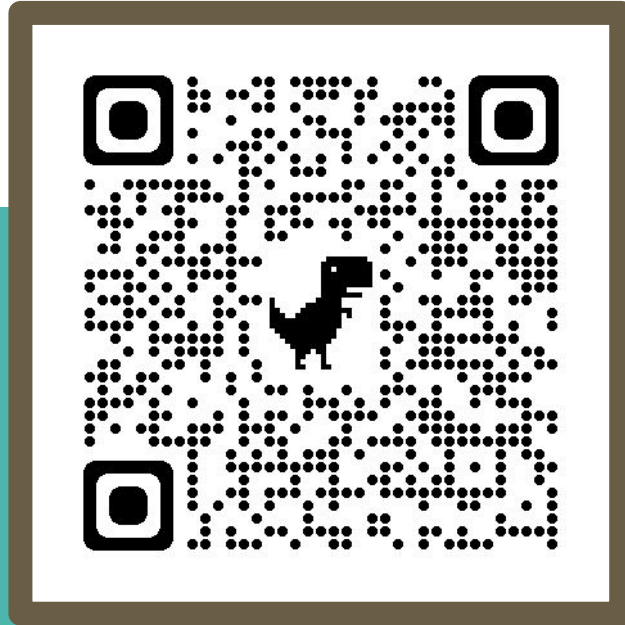
- Available for check out with the front desk, not specific to Sensory Friendly Morning
- Curated to have the following
 - Alerting Tools
 - Ie. light stick
 - Calming Tools
 - Ie. Noise cancelling headphones, sunglasses
 - Organizing Tools
 - Ie. whiteboard with dry erase marker, visual cards, emotion cards
 - Grounding Tools
 - Ie. squish ball



Sensory Bag Show and Tell!



**For Resources and More Information
Scan the QR Code:**



Thank you!

— We appreciate your feedback! —
