

# **Sensory Supports For Autistic Students**

Presented by Ellie Hamilton, Autism Specialist and Barb Niessink,
Occupational Therapist

# Tell us about you on Padlet.

tinyurl.com/y6f7m4e8

#### Share

- 1. Name
- 2. District
- 3. Why are you interested in Sensory?



# **Learning Outcomes**

- Participants will recognize the sensory needs of Autistic Students in PK-12 educational settings.
- Participants will identify a collaborative team in their educational setting to support the sensory needs of Autistic students.
- Participants will determine and reflect on the sensory supports available in their PK-12 education setting for supporting Autistic students.

# Why sensory support for Autistic learners?

About 56% to 70% of learners with Autism are estimated to have sensory processing challenges (Baranek, David, Poe, Stone, & Watson, 2006; Ben-Sasson et al., 2007.



# Let us know about you on Padlet.

Padlet

# New Smells and Overstimulated examples by Young Sheldon

Link to video 1:20

https://www.youtube.com/watch?v=o\_Qwng\_M07Q&t=80s

Link to video 1:55

https://www.youtube.com/watch?v=FMXRRKsg7jA&t=115s

Note: Please keep in mind each individual's sensory experiences are unique and the media does not always portray how Autistic people think and feel accurately.





# The Pyramid of Learning

Perkins.org

The Pyramid of Learning & Development\*



<sup>\*</sup>Adapted from Taylor & Trott 1991; The Alert Program

The Pyramid of Learning and Development (adapted by Livingston) provides a framework to think about the flow of learning and development in relation to sensory systems and skill-building.

# Do not begin a sensory routine without consulting the support of an Occupational Therapist.

 Follow district procedures for parent permission and implementation guidelines



# **Sensory Planning**

#### Positive Partnerships:

- Planning Tool
- Diversity Wheel

#### Hands on as we grow Blog:

- Sensory Planning
- <u>Sensory Activities</u>. Sample week of activities
- Water
- Cardboard Tube Activities

# **Sensory Planning**

**Sensory World** 

**Sensory Planning form** 

Time	Daily Events	Activities/Accomodations	Comments						
	Wake-Up			7					
	Self-Care								
	Breakfast								
	Arrival at School or Childcare								
	Mid-Morning								
	Lunch		Support Te	am:					
	Mid-Afternoon		1. 2. 3.						
	Arrival Home		4. Student:						
	Dinner		_	Daily Schedule:					
	ı	'	Time	Activity or supplies needed	Sensory Support	Team member providing support or independent			
					I	I			

# **Sensory Sensitivity**

- <u>Link (from South West Central Service Cooperative)</u>.
- Page two has suggestions to try



#### What A Sensory Sensitivity May Look Like

Visual	Auditory	Tactical (touch)	Taste/Smell	Proprioceptive (difficulty interpreting sensations from muscles, joints, ligaments & tendons)	Vestibula (over or under sens balance & moven sensations)
Stares at spinning objects.  Spins their body Turns opposite direction from where the teacher is lecturing Demands to wear sunglasses indoors Extremely organized oor unorganized room (knows when an object has been slightly moved) Loses place when reading Gives no eye contact or looks beyond a person's face Trouble locating desired toy on a cluttered shelf Turns or tilts head	Covers ears for a fire drill or when the class is loud. Runs from loud areas Complains of noises in room or outside of window (ie lawn mower, student writing) Covers ears in the cafeteria or cannot go into the gym when there are many people in it. Doesn't like the sound of windshield wipers Doesn't respond to verbal prompts when putting on noisy clothes Talks louder than anyone else	Throws arms back when about to be picked up by adult or pulls away when trying to hold child's hand Is always hanging on adult or laying between his box spring and regular mattress Avoids touching certain textures (fabrics, carpet, slime) Preference for touching specific objects (silk) Dislikes getting hands or meet messy Touches everything in sight Avoids being touched on the face/ hair/head (trouble with washing hair/face) (Hygiene)	Won't eat certain foods or eats extreme tasting foods (lemons/hot sauce) Gags when told to eat food they don't like Licks or tastes playdough or toys Notices smells of perfume, cologne, onions, coffee, on individuals. Smell everything Won't visit certain environments due to the smell (zoo, farms, etc.)	Pulls, twists, or chews on things Leans, bumps, or crashes into objects Walks along touching walls Too much pressure when writing Stands too close when talking to others Walks stiff and uncoordinated	May seem to be seeker (jumping high places, drivi fast)     May be sedentar cautious or hesit take risks     Difficulty coording movements of ey     Trouble staying:     Constantly leans on hands or arm     Prefers to lie do than sit upright     Feels seasick whriding in a car, by train, airplane, escalator, or elee     Extreme loose of tense grip on perscissors     Enjoys being ups down

# **Sensory Suggestions for the Classroom**

 Link (from South West Central Service Cooperative)



#### Sensory Suggestions for the Classroom

#### Journal and Handwriting

Typical Activities:

- Draw a picture in a journal/notebook and write about what you drew.
- Handwriting or tracing pages

#### Alternatives:

- Add some vestibular input: Break into small groups or partners, act out a story or idea and then write about it in a journal.
- Add some vestibular input: Allow children to complete their writing in different positions around the room-sitting or lying on the floor or sitting in a beanbag chair with a clipboard, standing with their work taped to the wall, or lying under a table with their worked taped to the underside of the table.
- Add some auditory input: Listen to a story on headphones and draw a picture while listening.
- Add some tactile input. Practice letter formation in a sand or salt tray with colored paper at the bottom or try tracing/writing using a squiggle writer.
- Add some visual input: All students to use different pens, markers, and colored pencils for writing and drawing.
- 6. Add some olfactory (smell) input by using smelly markers.

#### Flashcards

Typical Activities:

 One on one drills for sight words, math facts, or other concepts-showing one flashcard at a time and having the student answer.

# **Lessonpix Sensory Visuals**

- Sandtable Topic Board
- Bubbles Topic board

- Blocks Topic Board
- Offer choices and use a visual picture or choice board.
- Choice Board Intervention Strategy by Ocali/
   Ohio Center for Autism and Low Incidence

# The Many Faces of Autism by Ocali Chapter 3 Sensory

 Link to video 8 min autismcertificationcenter.org/course/1/chapter/146

Keep in mind that sensory experiences may impact other disability areas





### **Connect and Redirect**

Link to video 14:34
<a href="https://www.youtube.com/watch?">https://www.youtube.com/watch?</a>
<a href="mailto:v=fGseTSLY3cl">v=fGseTSLY3cl</a>



### How can we do better for our kids?

- Trigger warning this video discusses restraint and seclusion in the school setting.
- Link to video <u>https://www.youtube.com/watch?v=</u> <u>wsQ7XbKbpeY</u>
- 7:50 and 11:34



# **Neurodiversity Affirming Sensory Integration**

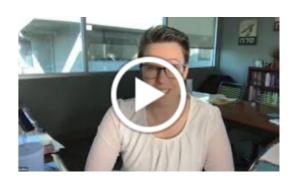
Link to video 1 - 23:41

https://www.youtube.com/watch?v=MV7klFMUHJU&t=1421s

Link to video 2 - 27:50

https://www.youtube.com/watch?v=MV7klFMUHJU&t=1670s





### **Brain Article**

gregsantucci.com/infographic / upstairs-brain



# **Upstairs Brain**

We need to be able to monitor the sensory input coming from our environment, think and problem-solve. When our kids are having a hard time, they're in their "downstairs" brain. They can't access their "thinking" brain, and no amount of yelling, threatening, or punishment is going to get them there.

#### How do you help a child when they are in their downstairs brain?

 First, lower expectations. Help them get regulated. This could be as simple as a hug or just being present. Once regulated only then can head upstairs.

# **Brain Breaks and Sensory Breaks**

Gwen Wild, MOT, OTR/L & Sherry
Steeley, PhD developed a "Model for
Classroom Based Intervention for
Children with Sensory Processing
Differences" and completed a research
study in a rural school district in TX.
They incorporated "Brain Breaks" and
"Sensory Breaks" into the children's
daily routines.

#### Improvement was noted in these areas:

- Social Participation/Social Skills
- Visual and Auditory Processing
- Planning and Ideas
- Adaptability
- Functional Communication Atypicality
- Leadership
- Attention Problems
- Hyperactivity

#### **Brain Breaks**

- Brief (30-60 seconds) opportunity for whole body movement
- Primary purpose is to get in touch with one's body and where it is in space.
- For Pre-K through 1st grade, "Brain Breaks" can easily be built into transitions

- Recommended frequency:
  - Pre-K through 1st grade: every 15 minutes
  - 2nd through 5th grade: every 30 minutes
  - 5th grade to 6th grade: every 45 minutes

### **Ideas for Brain Breaks**

- Desk stretches
- Chair Push-ups
- Cross Crawls
- Coffee Grinder
- Pressure push
- Drink from water bottle
- Animal Walks
- Ear massage
- Self-hug

- Hop on one foot
- Row Boat
- Finger pulls
- "Make the room bigger" Wall pushups and wall sits
- Yoga poses
- Action songs
- Belly breathing
- Gallop
- Isometrics (push hands together, pull apart, push legs against one another)

# **Tips for Brain Breaks**

- Allow the student to select and lead the "Brain Break"
- Fill a poster board with "Brain Break" picture options and allow them to choose from them
- Follow each "Brain Break" with two deep breaths of "belly breathing"

# **Sensory Breaks**

- Goal of sensory breaks is to regulate the neurochemicals in the brain.
- Optimal: at least 10 minutes of moderate to high intensity sensory input every 2 hours for ages 10 and up.
  - Pre-K to 1st grade = every hour
  - 2nd to 4th grade = every 1 ½ hours
  - 5th grade and up = every 2 hours

- Recess, PE, art, music and lunch can usually count as sensory breaks
- Need to be at least 10 minutes in length. Sensory seekers may need longer.
- Stick with activities that are primarily proprioceptive or "just right" challenge

### **Cari Bert Seminars**

cariebertseminars.com



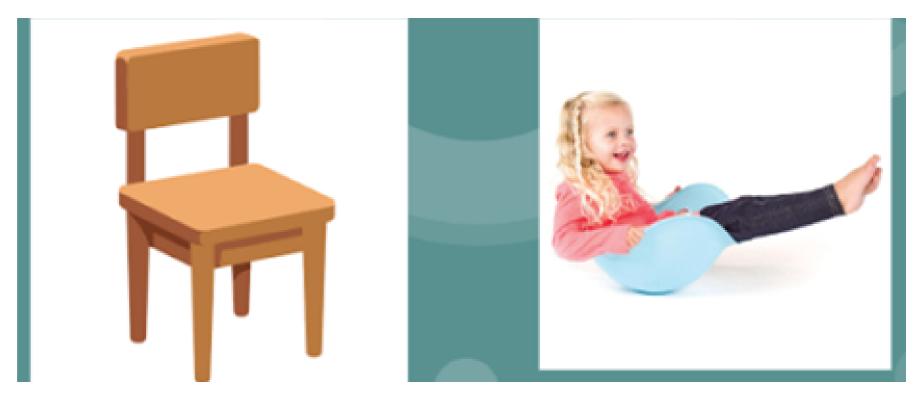
# **Re-thinking Classroom Expectations**

- What are the classroom expectations?
- How can we adjust for students with sensory needs?



# Try a chair or bilibo seat

moluk.com/ bilibo.php



# **Cube Chair Options**



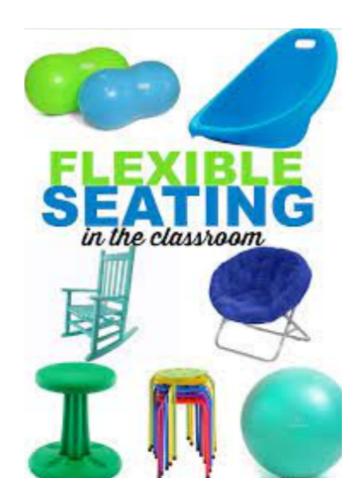






# **Flexible Seating**

Offer a **Choice Board** 



# Wiggle Seat

teacherdirect.com





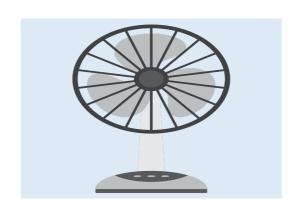
# What is the behavior really telling us?



# Autistic Students may have heightened senses









# Autistic Students may have heightened senses

A student may have hearing abilities that make lights, fans, or other items sound like a helicopter.

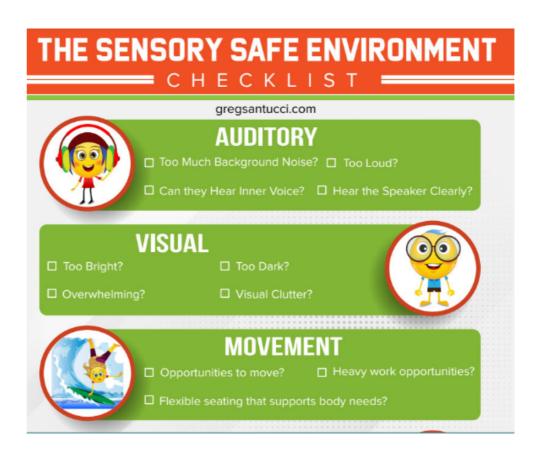
Close your eyes and see if you hear any sounds.

Check the room for smells. The lunchroom and essential oils are biggies! Perfume can be a trigger too.

# **Occupational Therapy association 2023**

#### \* Deep Pressure Activities \* Squeeze up and down the arms, from hands to 1. Self Hugs Position hands on chair and push up, hold for 5 sec: 2. Chair Push-Ups position hands under chair and pull up, hold for 5 sec & Chair Pull-Ups Stand up and reach with the left arm as high as you 3. Arm Reaches can, then reach with the right, then reach with both and wave in the air Grab fingers with closed hands and pull as hard as you 4. Hand Pulls Position hands in prayer position with elbows out, pushing palms together; switch hands so fingers touch forearms and push palms together with elbows out Lean on the front edge of a desk, take one step back, and do 10 push-ups (keep elbows out) Press open palms on a wall, keeping feet Wall Push-Ups shoulder-width apart and elbows out; then push away Stand on tip toes and fall back on heels (you will feel a 8. Tip Toe Clunk "clunk" if you do it right!) (groups of 3) Grab each other's wrists, gently lean/pull 9. Partner Pulls out, then have the outside people turn around and grab with opposite hand and repeat 10. Shoulder Teacher pushes firmly on student's shoulders, then Muscle Push does hand hugs (squeezes) up and down the arms

# **Sensory Environment**



### **Structured Breaks**

#### **Autism Internet Modules**

A structured break may include, but its not limited to:

- headphones or earbuds
- blankets
- music
- drawing paper and markers
- puzzles
- fidgets
- magazines
- waterbottle

## **Structured Breaks**

#### **Autism Internet Modules**

#### A structured break is NOT:

- Time out
- Seclusion
- Punishment
- Escape from work

#### **Structured Breaks**

#### **Autism Internet Modules**

Visual supports for structured breaks may include:

- Breathing cards
- Timer or countdown
- Wait card
- Stress Thermometer
- Power card

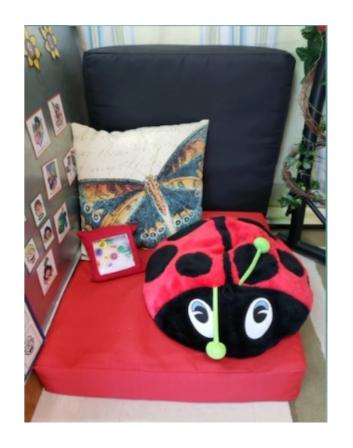
# **Examples of Structured Break Areas**





# **Examples of Structured Break Areas**





# **Examples of Structured Break Areas**





# Structured Break Area in a job site location





## Structured Break Area in a job site location





Private work space with dim calming lighting and music.

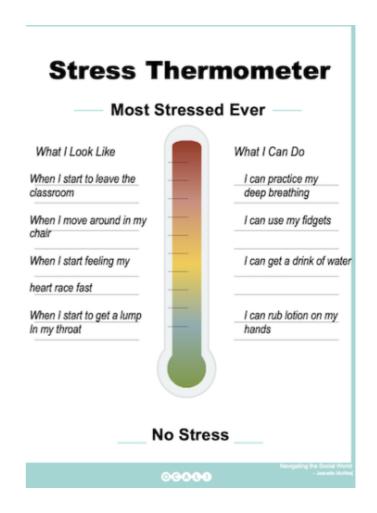
## **Visual Supports**

Ocali Stress Thermometer Visual

**Box Breathing** 

**Breathing Cards** 

**Power Cards** 



## **Sensory Differences**

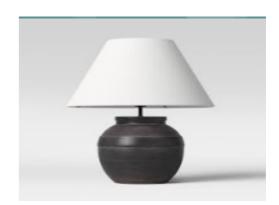
Most individuals with Autism do not experience sensory stimuli the same way as neurotypicals. Some are overly responsive whereas others are under-responsive to sensory experiences in the environment and within their bodies.

Individuals with sensory processing disorders benefit from services from and occupational therapist who can provide assessment and intervention strategies to help them manage their sensory differences and improve their access to successful home, school, social, and work experiences.

**Autism Internet Modules** 

# Cover Lights, turn off, or use lamps.





## **PVC DIY Bead Bar**

Paths to Literacy



## **Star Autism Support & Ocali Visual Supports**

Request Template. "I want" giving choices

**Food Icons** 

**Choice Board Sensory Activities** 

**Choice Board Snack** 

# **LED Color Changing Glow Balls**

enablingdevices.com





# **DIY/Do It Yourself Swing**





## Weighted Shopping Cart for Mobility and Sensory





# Weighted Cart for Mobility and Sensory





## **Hallway Obstacle Courses**

www.youtube.com/watch?
v=P4q8dNwsR3E

Pair with goal content or core content.



#### **Obstacle Course Outline**

- 1. Helicopter Spins x5 each direction
- 2. Alligator crawl across mat
- 3. Move across floor on ladder
- 4. Find 2 hidden items in the sensory bin
- 5. Blow 2 cotton balls across the table one end to the other.

- 6. Walk across the balance beam, stepping over small stickers or obstacles.
- 7. Place 3 beads onto a string or pipecleaner to copy pattern displayed
- 8. Listen and identify animal sound
- 9. REPEAT

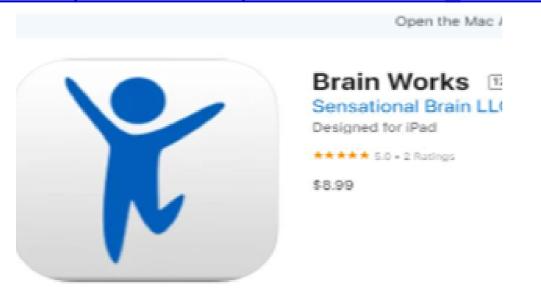
#### **Obstacles Course Ideas for Older Students**

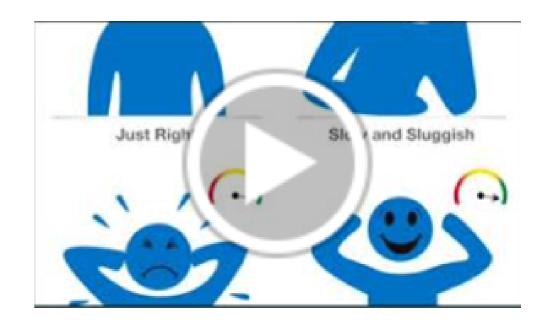
- 1. Forward and backward rolls (somersault)
- 2. Jump rope
- 3. Balance Beam
- 4. Jumping Jacks
- 5. Snow angels on the floor
- 6. Shooting baskets
- 7. Bean Bag toss
- 8. Lift a certain amount of weight for specific repetitions

- Specify amount of time on treadmill or stationary bike
- 10. Repeat sequence work on memory, following directions, etc.
- 11.A learning or functional task such as an age appropriate puzzle, writing activity, or math skill can be incorporated and adjusted to the child's age and developmental level.

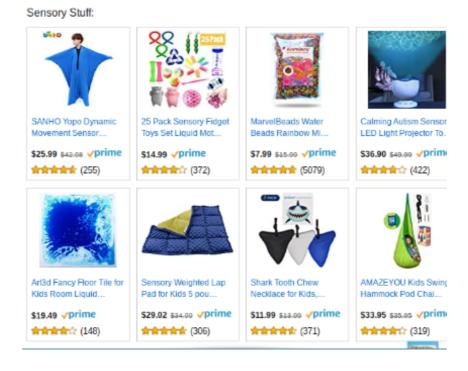
## **BrainWorks by Sensational Brain LLC**

Link to video 2:41 <a href="https://www.youtube.com/watch?v=uOnr\_oBVUa0">www.youtube.com/watch?v=uOnr\_oBVUa0</a>





## 50 Best Sensory Toys for Toddlers and Kids with Autism



## **Sensory Break Ideas**

- Playground play-gallop, skip, run, walk backwards: encourage a built in obstacle course using the playground equipment, encourage heavy work game with others.
- Classroom or hallway obstacle course
- Go Noodle <u>www.gonoodle.com</u>
- Brain-breaks <a href="https://brain-breaks.com/">https://brain-breaks.com/</a>

- You Tube movement videos search "brain breaks" watch content and check district procedures before using with students.
- Bouncy activities need to be followed by deep pressure or heavy work activities.
- End with deep breathing

## **Sensory Break Ideas Continued**

- Sensory path in hallways <a href="https://thesensorypath.com/about-us/">https://thesensorypath.com/about-us/</a>
- Make your own sensory path <u>https://www.pinkoatmeal.com/diy-sensory-path-and-motor-path/</u>
- Obstacle Course Video <u>https://www.youtube.com/watch?v=AX</u> <u>b9zBs6OBk</u>
- Use materials and equipment available to you-look around your school for items.

- Older students may be able to use equipment in the weight room, machines, lift weights, etc., with supervision and following district procedures.
- Run errands, clean, and work on adaptive skills such as vacuuming, sweeping, dusting, etc. with supervision.
- Talk to the occupational therapist at your district/building and ask for ideas for your specific student

## Sensory Toys for Middle School High School Age Students

Find a space for the student

**Body Sock** 







## Sensory Toys for Middle School High School Age Students

**Calm Strips** 





# Build in sensory with play introduce sensory in daily routine

Gloves, socks, or latex gloves can be good protectors for sensitive hands.



Green Pea Sensory Squishy Bag happytoddlerplaytime.com



# **Low Cost Fidgets**







## **Fun Fabrics and Pool Noodles**







# **Shaving Cream Writing**



## **Sensory Routines or Breaks**

Zones of regulation training calls it "sensory lifestyle" all day supports versus single break periods. Think about all day!





# **Simple Fidget Ideas**

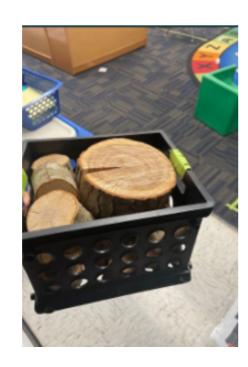






# **Heavy Work Task Examples**

Early Childhood/ Elementary





# **Heavy Work Task Examples**

Elementary/Middle School/ High School







# **Heavy Work Task Examples**

Elementary Middle School High School







# **Jellyfish Live Video**

Link to video

www.youtube.com/watch?
v=OMlf71t2oV0



## **Eloping (running away) Sensory Connection**

Scenario: Student elopes and runs off school grounds Support Ideas:

- Build a relationship
- Give options where to run with visual pictures
- Place visual signs go here or written plan where to go when running (track, hallway, gym)
- Create a running plan before school or determine an area safe for running when needed. This could be a treadmill, hallway, or track.
- Individualize based on student's needs



## Fake Jellyfish Aquarium

Calming

Battery operated or plug in options

Works as a nightlight or lamp for darkened room



## **Structured Breaks by Autism Internet Modules**

- Do It Yourself baggies with food coloring
- Do It Yourself <u>Hair Gel Sensory Baggies</u>



• Liquid Tile



# **Sensory Pans**

#### pathstoliteracy.org





#### **Food Support**

- Trying new foods choice wheel
- Meal Time Rules Poster
- <u>Autism and Food Aversions 7 ways to Help a Picky Eater</u> article by Autism Speaks

#### **Treatment and Accommodation Ideas**

Created by Barb Nessink Occupational Therapist

Barb.Niessink@swwc.org



Check with district procedures and Occupational Therapist before starting any sensory programming

#### **Pressure Touch Model**

If tactile defensiveness is severe contact your district Occupational Therapist about possibly utilizing the pressure touch model.



Check with district procedures and Occupational Therapist before starting any sensory programming.

#### Vestibular: "Seeker"

- Move-N-Sit or Wiggle cushions, therapy ball or deflated beach ball at table
- Cut slits in tennis balls and place on the end of opposite chair legs to allow "wobble"
- Allow child movement breaks during class or homework time
- Jump on trampoline
- Playing on tummy with therapy ball
- Swinging
- Bike Riding

#### Vestibular: "Avoider"

- Make sure feet can reach the ground or a surface when seated in chairs or allow standing
- Provide proprioceptive or "heavy work" before and after vestibular activities
- Go slow with introducing movement activities or allow compensatory technique
- Allow child to choose and be involved in the activity to provide sense of control

## **Proprioceptive System (input into the joints)**

- This input helps "seekers" and "avoiders"
- Heavy work system; Encourage any jobs around the classroom such as carrying milk crates, moving heavy books or furniture, erasing/washing chalkboard, stapling on bulletin boards, stocking pop machine, return library books, empty wastebaskets, water plants, sweep floors, sharpen pencils, etc.
- Wearing weighted items, such as lap pad, backpack, hat, collar, blanket, heavy book on lap, etc.
- Any jumping exercise such as jumping on trampoline, jumping jacks, running, jumping on bubble wrap packaging, etc.

## Proprioceptive System (input into the joints) continued

- Arm strengthening with wall push-ups, chair push-ups, scooter board, tug of war, "painting" with water on the fence or side of building, completing work on chalkboard, etc.
- Complete activities on tummy when able in class or during homework or play time at home
- At Home: Vacuuming, shoveling snow, moving furniture, carrying groceries, washing the car, etc.
- Deep Massage, "squishing" in bean bag, rolling in mat.

## Tactile System: "Seeker" or encourage "Avoider"

- Host a "Messy" Day
- Fingerpaints; shaving cream, foam soap, pudding, "slime," play-doh, theraputty.
- Hiding toys in buckets of rice, sand, wet or dry noodles, dry beans, styrofoam peanuts, etc.
- Working with projects requiring gluing, sandpaper, fabric, wood, and other textures.
- Provide basket of fidget toys or common objects (paper clip, eraser, etc.) for child to choose from to help maintain attention during classroom activities

#### Tactile "Avoider"

- Place paint or gel inside a ziplock bag and allow child to "paint" without getting messy
- Purchase tag-less clothing
- Massage scalp before haircuts
- Place x-ray vest over child during dentist visit (for proprioceptive input)
- Soak nails and press on nail bed before cutting nails
- Utilize t-shirt sheets

## Visual System: "Seekers and Avoiders"

- Evaluate classroom and reduce amount of visual distractions hanging from ceiling and walls (avoider)
- Complete activities on a raised surface such as a easel or chalkboard
- Provide outlines at a desk or letter/number lines taped to desk to decrease amount child has to copy from board
- Color code notebooks and book covers to help with organization (i.e. green for math, blue for science)
- Teach child to take a visual break ("avoider"
- Ask parents if child has had a recent full visual assessment with eye doctor

## **Auditory System: "Seekers and Avoiders"**

- Warn children when able before fire drills, morning announcements and other loud noises in school
- Close the door to your room to decrease hallway distractions
- Allow headphones or earplugs if needed
- Playing soft music in background during independent work may help with calming (but should be evaluated closely as it may also be too distracting)
- Create a small area in the corner of the room where the child can go to take a sensory break
- May need to position self in front of child and touch hand or arm to get attention when calling child's name ("seeker")

#### Oral "Seeker"

- Proprioceptive input for the mouth
- Chewy foods are "heavy work" for the mouth and are organizing (bubble gum, granola bars, dried fruit, bagels, jerky)
- Crunchy foods are alerting (pretzels, baby carrots, crackers, crunchy cereal)
- Sucking and blowing are also organizing (sucking yogurt or applesauce through a straw, blowing cotton balls on a table or blowing a whistle, blowing bubbles, etc.)
- Battery operated or vibrating toothbrush may be helpful for "seeker" or "avoider"

#### Oral "Avoider"

- Encourage age appropriate oral play (whistles, blowing, chewing, tasting/licking new foods)
- May need to touch and play with food before they even consider tasting it
- May be able to be encouraged to lick the new taste or put in mouth only briefly and then spit it out
- If it is causing weight loss (failure to thrive) or other health concerns, may need to see a person specializing in treating oral aversions and/or nutritionist to ensure diet is adequate.

## **Treatment Activities Accommodations Interoception**

- Heavy work activities/input to the large joints of the body
- Deep Diaphragmatic breathing
- Identifying emotions
- Meditation
- Mindfulness programs
- Yoga
- Tai-Chi
- Body scan to connect body signals to feelings
- Biofeedback

# **Books + 12 Books to read if you teach Autistic Students Article**

12 Books to read if you teach Autistic
Students
weareteachers.com



#### **Support for Families**

- Support For Sensory Needs Facebook Group
- Sensory Processing Disorder (SDP) Support Facebook Group
- Project Sensory
- Sensory Processing Parent Support Group
- Sensory Processing Advocacy

#### References

Hands on We Grow

**GregSantucci.com** 

Pathstoliteracy.org

Ocali.org

**MDE Autism Spectrum Disorders** 

**Autism Speaks** 

National Autism Resources

@Star Institute

**Star Autism Support** 

MN Low Incidence Projects ASD

MN Low Incidence Projects OT

**Afirm Module Sensory Integration** 

**Autism Internet Modules** 

**ASUM.org** 

**Cari Bert Seminars** 

Perkins.org

#### **Additional References**

References Continued - Google Docs



## What questions do you have?

If you have concerns about a child's development contact:

**Help Me Grow Minnesota** 





## Thank you!

Ellie Hamilton, Autism Specialist <a href="mailton@swwc.org">Ellie.Hamilton@swwc.org</a>

Barb Niessink, Occupational Therapist Barb.Niessink@swsc.org

