Improving Children's Attention through Sensory Strategies

Hannah Northrop, OTR/L
Occupational Therapist
Syracuse City School District Early Childhood Program
Agenda

- Background on the senses/ Sensory Processing Disorder
- Sensory strategies (modifications, sensory breaks, sensory routines)
- How to Implement
- Look at examples/questions
Objectives

1. Identify how sensory processing disorders impact children in the classroom.

2. Understand the 2 movement senses and ways to help develop them

3. Identify classroom modifications

4. Understand what whole class brain breaks and high intensity sensory breaks are, identify why they are important, and determine how to implement them into the everyday classroom routine.

5. Know how to create sensory routines
MOVEMENT ➔ ATTENTION
5 Senses

- Sight
- Touch
- Hearing
- Taste
- Smell

http://voiceurviews.com/you-should-know/5-senses-human-body-even-worthy-think/
8 sensory systems

Far systems – tell us what’s going on in the world around us
- 1. Visual
- 2. Auditory
- 3. Olfactory
- 4. Gustatory
- 5. Tactile

Near systems – tell us what’s going on in our own bodies
- 1. Vestibular
- 2. Proprioceptive
- 3. Interoception
2 Movement Senses

- Vestibular & Proprioceptive
- Responds to movement and gravity
- Many children who have difficulty attending are typically UNDER responsive to these sense and may appear to be “behavioral”

https://www.education.com/blog/teachers/movement-classroom-create-culture-thinking/
Vestibular

- Movement Sense
- Body movement – helps us plan our actions
- Maintains balance, posture, muscle tone
- Informs of us our relationship to gravity
- Helps with vision
- Help develop this system by jumping, spinning, swinging, sliding

http://www.thesoundlearningcentre.co.uk/the-cause/balance-vestibular/
Proprioceptive

- Body Awareness (relationship of our body parts to one another)
- Body receives proprioceptive information through muscles and joints
- This sense effects our security, self-awareness, and ability to feel safe in our surrounding environment
- Help develop this system by heavy work tasks (pushing/pulling, carrying weighted items)
Sensory Processing:
How our brains respond to incoming sensory information from our bodies and from the world around us

Someone without Sensory Processing issues...

- Senses working together

- Able to notice relevant stimuli and filter out stimuli that is not important
Sensory Processing Disorder (SPD)

- When sensory signals aren't detected or are not organized into appropriate responses
- “Traffic Jam” – prevents certain parts of brain from receiving information needed to interpret sensory information correctly.
- Difficult to process information received through the senses, which creates challenges in performing daily activities
Children with SPD

- Affects 5-13% of students

- Sensory Processing Disorder Scientific Work Group (Ben-Sasson, Carter, Briggs-Gowen, 2009) suggests that AT LEAST 1 in every 6 children experiences sensory symptoms that affect aspects of everyday life.

- Negatively impacts attention/arousal, movement, posture, communication/social interaction, daily routines
5 Types of People

- Well-Modulated Person
- Over-Responsive
- Under-Responsive
  - Sensory Seeking
  - Passive
- Mixed

http://special-ism.com/the-under-responsive-side-of-spd/
Over-responsive
Visual/auditory

- Cannot filter unimportant information out
- Visual: Easily distracted by objects within the classroom
- Auditory: Easily distracted by background noises (fans, sounds in the hallway)

http://www.slate.com/articles/health_and_science/medical_examiner/
Sensory Seekers
Tactile/Vestibular/Proprioceptive

- **Tactile:**
  - Seeking touch input (may touch friends or things in classroom)
  - Fidgeting

- **Vestibular/proprioceptive:**
  - Cannot sit still: rocks in chair, fidgets
  - Removes self from task and roams around the classroom
  - Loses attention when seated for a long time
  - Impulsive and hyperactive
  - Crash, spin, jump

- [https://youtu.be/b2iOliN3fAE](https://youtu.be/b2iOliN3fAE)
Sensory Strategies

- **Modifications**
  - Changes to the environment

- **Sensory Breaks**
  - Structured time for sensory input

- **Sensory Routines**
  - Sensory input built into a routine
Modifications

How can we change the classroom environment to improve attention?
Modifications: Under responsive (passive – low arousal)

- Fans
- Cold
- Timers

Modifications: Over responsive (high arousal)

- White noise, calming music, metronome
- Weighted lap snake
- Visual tools
- CHOICES!
Modifications: Vision (over-responsive)
Modifications: Vision (over-responsive)

- SIMPLIFY!
- Preferential seating (front of room, away from doors opening/shutting, away from shelves)
- Reduce visual distractions on desk or in work place
- Remove items near child’s desk that are hanging from ceiling or in front of student
- Cap, visor, lighter sunglasses
Modifications: Auditory (over-responsive)

- Headphones
- Earbuds
- Preferential seating
- Close the door
- Minimize additional noise (fans)
Modifications: Tactile (under-responsive)

- Provide fidgets
- Velcro strip under desk for child to rub as needed
- Define work area/circle area with duct tape
Modifications: Proprioception/Vestibular (under-responsive)

- Weighted lap pad
- Therapy ball for seating
- Sit on a disc
- Thera-band under chair
- Allow them to stand
Sensational Brain
Sensory Breaks & Sensory Routines

- Gwen Wild, OTR

- https://www.sensationalbrain.com/

**Username:** hannahnorthrop
**Password:** sensorystrategiesrock
Sensory Breaks
Structured time for sensory input

1. Brain Breaks

2. High Intensity Sensory Breaks
Whole Class Brain Breaks

60-90 second movement activities  
Increase blood flow in body & stimulate brain function

- Pre-K through 1st grade: every 15-20 minutes
- 2nd and 3rd grade: every 30 minutes
- 4th through 6th grade: every 30-45 minutes

- Set a timer
- Make it CHILD DIRECTED
- Brain break option boards

*** ALWAYS end with belly breathing ***

https://www.youtube.com/watch?v=GkrZBsOlt3k
Seated Brain Breaks

- Finger Pulls
- Desk Stretches
- Chair Push-Ups
- Pressure Push
High Intensity Sensory Breaks

Longer in duration and less frequent

- At least 10 minutes in length
  - Pre-K through 2nd grade: every 60-90 minutes
  - 3rd through 6th grade: every 90-120 minutes
  - (Maybe one in AM and one in PM)

- “We don’t have time for lengthy movement breaks!”
  - Gym and recess count!
  - Playground laps (gallop, skip, run, walk backwards)
  - Use playground time to your advantage (encourage swinging, sliding, jumping, upside down play, heavy work)

- Yoga
- Classroom obstacle course
- If you’re doing something with bouncing, follow this by deep pressure or heavy work

*** ALWAYS end with deep breathing
Sensory Routines

- Visual Schedule

- Building strategies into a child’s day

http://fun-a-day.com/morning-routine-chart-for-the-preschool-classroom/
Visual Schedules

- FIRST & THEN … for younger children or children with lower cognitive capabilities
- Help them choose the sensory break (give them 2 options)
Visual Schedules

- For older children or children with higher cognitive capabilities, have them choose their own sensory break
Building Strategies into the Day

Calming Sensory Strategies

- Activities that provide deep pressure to the whole body are calming to the nervous system. Roll a ball over the child while applying deep pressure. You can also use a pillow or bean bag chair! This will help to calm the child and improve their attention.

Alerting Sensory Strategies

- Jumping is an activity that revs us up.
- Encourage a child to take a break and jump when you notice they are day dreaming.

Just Right Sensory Strategies

- Just Right sensory activities offer a lot of proprioceptive input, which is almost always helpful in getting us to the appropriate level of arousal.
- Allow them to crash into a bean bag
- Heavy work input
Building Strategies into the Day

- Children who are sensory seeking (crashing to the floor, running around the room, have extraneous movement, cannot keep their body calm) NEED heavy work input throughout the day

- Give them chores! (scrubbing the tables, moving heavy paint bottles, rearranging chairs, help bringing lunch to the room)

- Transitions → carrying weighted crate filled with books, pulling wagon, weighted backpacks

- Games of extremes: stomping like a giant, walking quietly like a turtle
Research

- Pre-K thru 6th grade, control groups and experimental groups

- Experimental groups → teacher training, brain breaks, two 10 minute high intensity sensory breaks, sensory tools and strategies as needed

SPM:
- Social participation increased by 12.7%
- Visual processing increased by 10.7%
- Auditory processing increased by 9.0%
- Tactile processing increased by 5.0%
- Body awareness increased by 7.5%
- Balance/motion increased by 8.6%

BASC 2:
- Hyperactivity improved by 12.2%
- Attention improved by 13.9%
- Social skills improved by 18.2%
- Learning problems improved by 14.2%
Information regarding sensory processing disorder, sensory strategies, and research can all be found at
www.sensationalbrain.com

If you have any questions please email me at hnorthrop@scsd.us