

Environmental Adaptations for Sensory Processing Challenges

Environmental adaptations can be used as an effective strategy to modify sensory input in order to support improved regulation, participation, and engagement. This is done through providing a better match between the sensory system of an individual child and sensory demands of their environment.

Dunn's Model of Sensory Processing is broken into four categories:

Sensation Seeking:
High threshold and
active self-regulation
strategy.

Sensory Avoiding:
Low threshold and
active self-regulation
strategy.

Sensory Sensitivity:
Low threshold and
passive self-regulation
strategy.

Low registration:
High threshold and
passive self-regulation
strategy.

Environmental Adaptions Broken Down by Sensory System and Dunn's Sensory Processing Categories

Visual

- **Seeking:** Increase visual input
 - Colorful and dynamic decor
 - Place mirrors at the floor level
 - Colored lighting
 - Use of twinkling lights
- **Avoiding:** Reduce visual input
 - Remove bright colored or visual distracting items off of walls
 - Keep play area clear and clean with only one toy at a time
 - Visual barriers/dividers
 - Storage using opaque bins
 - Window shades
- **Sensitive:** Decrease competing visual input
 - Reduce visual clutter
 - One task presented at a time
 - Plain backgrounds behind work
 - Neutral colors
 - Consistent room arrangement
- **Registration:** Make important information easier to notice
 - Use of colored tape along corners, edges, and door frames
 - Use of labels signs, and different colored baskets in play areas

Auditory

- **Seeking:** Increase opportunity for music and sound.
 - Background music
 - White noise machine
- **Avoiding:** Reduce environmental auditory input.
 - Close doors
 - Quiet workplace
 - Noise cancelling headphones
 - Carpets and curtains to absorb sound
- **Sensitive:** Limit competing sounds.
 - One person speaking at a time
 - Minimize background noise (seated away from pencil sharpeners, AC, hallways, etc)
- **Registration:** Increase salience of sounds.
 - Repetition of instructions

Tactile

- **Seeking:** Increase tactile variety in environment
 - Provide varied texture floor surfaces for barefoot play
 - Different texture seating options
 - Textured tables
- **Avoiding:** Reduce non-preferred tactile input.
 - Smooth desk surfaces
 - Soft seating materials
- **Sensitive:** Keep tactile input consistent and predictable.
 - Consistent seat and seating location
- **Registration:** Tactile markers incorporated into environment.
 - Provide textured cues on toys and surfaces
 - Textured floor markers.

Vestibular

- **Seeking:** Movement opportunities
 - Provide dynamic seating options (rocking chair, therapy ball, seat cushion)
- **Avoiding:** Stable environment
 - Provide stable base seating options with back support
 - Feet supported while sitting
- **Sensitive:** Predictable movement
 - Consistent seating arrangement.
 - Seat away from aisle and heavy traffic areas.
- **Registration:** Movement prompts
 - Room layout that encourages movement between stations

Proprioception

- **Seeking:** Increase environmental opportunities for heavy work
 - Heavy classroom furniture that can be moved safely.
 - Resistance bands attached to chair legs.
- **Avoiding:** Reduce force demands required.
- **Sensitive:** Provide stable body support.
- **Registration:** Increase proprioceptive feedback from the environment.
 - Furniture requiring postural activation such as exercise ball or bosu ball.

Olfactory/Gustatory

- **Seeking:** Increase pleasant environmental scents/flavors
 - Use scented cleaners, air fresheners
 - Strong/varied flavor opportunities
 - Bubble blowing, drinking through straws
- **Avoiding:** Fragrance-free/bland
 - Use unscented cleaners
 - Open windows, air purifiers
 - Separate foods on plate during meals
- **Sensitive:** Mild scents/flavors
 - Avoid overwhelming scents and flavors in environment
- **Registration:** Scent/flavor cues
 - Strong flavor/scent opportunities

References

Dunn, W. (1997). The impact of sensory processing abilities on the daily lives of young children and their families: A conceptual model. *Infants & Young Children*, 9(4), 23–35. doi:10.1097/00001163-199704000-00005

Watch a video explaining more
detail about this topic on YouTube!

<https://youtu.be/mA95IzXxuwU?si=BRWxnONzGNBogAVD>

