Addressing Sensory Processing and Mental Health Needs in the Middle School Setting

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Addressing Sensory Processing and Mental Health Needs in the Middle School Setting

Kate Bergsma

Western Michigan University

Department of Occupational Therapy
Abstract

Rooted in policy and program development, this occupational therapy doctoral capstone experience focused on addressing sensory processing and mental health needs at Grand Rapids Christian Middle School (GRCMS). With a significant proportion of students suffering from sensory processing difficulties and mental health concerns, the field of occupational therapy is distinctly equipped to address both needs within the context of school (Nielsen at al., 2021, Mental health for adolescents, n.d.). Occupational therapy’s background and expert training in both sensory processing as well as mental health needs proved vital the completion of this capstone. An intensive literature review was conducted to guide decision making in the rehabilitation of two sensory rooms at GRCMS and provide evidence-based activities to support sensory processing and mental health needs. Education was provided to staff and students to increase the depth of knowledge and understanding on the topics from the perspective of the field of occupational therapy. This capstone also focused on grant writing to secure funding for sensory room equipment and staff training.
Introduction

Grand Rapids Christian Middle School (GRCMS) is a private, Christian school located in Grand Rapids, Michigan. At the middle school campus, students, fifth through eighth grade, are given the opportunity to receive a well-rounded, liberal arts education. GRCMS strives to be an inclusive community by helping students of all backgrounds and abilities participate in daily school activities. Equipped with multiple teams and staff members, GRCMS is able to provide accommodations and modifications to all help students meet the academic demands. The inclusion services team offers individualized support to students with moderate to severe physical, cognitive, and/or emotional challenges. The educational support services team offers academic support to individuals with learning or other disabilities. To address mental health services and needs, a school social worker is available to all students who may be experiencing mental or emotional challenges. It is these teams and staff member that allow GRCMS to serve students of all backgrounds and abilities.

The school campus is also well-equipped to serve a wide variety of students due to its physical environment. The school is equipped with wheelchair accessible classrooms and hallways including ramps, moveable or flexible furniture, and adaptive seating. The school is also supplied with two sensory rooms for students who may have difficulty processing daily sensory information. These rooms, furnished with sensory equipment from swings to fidgets, allow students a much-needed break throughout the school day. Created quite some years ago, these sensory rooms were in need of expert advice and input for rehabilitation. In the designing of the two sensory rooms available at GRCMS, there was no input from professionals trained in sensory processing. With the need for professional assistance to rehabilitate these rooms and provide education on the topic, the occupational therapy doctoral capstone titled “Addressing Sensory Processing and Mental Health Needs in the Middle School Setting” was developed.

With a concentration area of policy and program development, this capstone focused on providing education to students and staff of sensory processing, as well as mental health, from
the occupational therapy perspective, with an emphasis on renovating the sensory rooms. Sian Zylstra, M. Ed., supervisor of educational support services at GRCMS, served as the site mentor for this capstone. Her knowledge of the school and expertise in educational support proved vital for the completion of this capstone. Serving as supervisor for over seven years, Zylstra was the perfect site mentor due to her profound understanding of the needs of both the students and the school. Through this doctoral capstone experience both the students and the staff at GRCMS were provided with education and evidence-based resources to support sensory processing and mental health needs.

**Literature Review**

**Sensory Processing**

Sensory processing is the idea of recognizing, interpreting, organizing, and responding to different sensory information and messages (Miller, 2014, pp. 6). Sensory processing is how the brain receives and responds to sensory information from the environment and the body (Miller, 2014, pp. 6). There are many different types of sensory information, or senses, that the brain needs organize and interpret (Miller, 2014, pp. 7). These senses include sight or visual information, taste or gustatory information, smell or olfactory information, sound or auditory information, and touch or tactile information (Miller, 2014, pp. 7). The last three senses are proprioception which is unconscious awareness of body positioning, vestibular input which provides information on body positioning in relation to gravity, and interoception which is how the body feels internally (Miller, 2014, pp. 7).

Difficulty processing these senses is diagnosed as sensory processing disorder (SPD) (Miller, 2014, pp. xvii). There are three patterns of SPD (Miller, 2014, pp. 26). Sensory modulation disorder (SMD), the focus of this capstone and one of the patterns of SPD, includes three subtypes that help further define the disorder (Miller, 2014, pp. 27). The first subtype is sensory over-responsivity (SOR) (Miller, 2014, pp. 28). SOR is defined as being more sensitive to sensory information including increased intensity in response to sensory information (Miller,
2014, pp. 28). Individuals with SOR have a lower threshold for sensory information. The second subtype of SMD is sensory under-responsivity (SUR) (Miller, 2014, pp. 27). An individual with SUR is less reactive to sensory information and has a higher threshold for responding to sensory input (Miller, 2014, pp. 31). The third and final subtype is sensory craving (SC) (Miller, 2014, pp. 32). SC is defined by actively seeking out sensory input, often in an unsafe manner (Miller, 2014, pp. 32-33). These three subtypes comprise SMD, a pattern of SPD, and can occur with just one sense or with a combination of different senses (Miller, 2014, pp. 28).

SPD is diagnosed in one in twenty children (Miller, 2014, pp. xvii). Even if not diagnosed with SPD, every individual has experienced sensory issues at some point in their lifetime (Miller, 2014, pp. 7). Whether it be a loud noise that startles or an inconsistent texture that touches the skin, sensory experiences are a part of daily life and can be challenging to navigate with or without SPD. A study by Nielsen and colleagues explored the frequency of sensory processing difficulties in children between the ages of five to eleven years old (2011). They found that 21.3% of the children reported sensory processing difficulties while another 20% of the children were reported to have been at risk for developing sensory processing difficulties (Nielsen at al., 2021). Regardless of pattern or subtype of SPD, sensory processing difficulties affects a large portion of individuals, including adolescents.

Because processing sensory information is a daily endeavor, difficulty processing this information can greatly impact life. For children and adolescents, sensory processing can greatly impact their school performance. Each part of a student’s school day requires their brain to navigate hundreds of different sensory experiences. During the school day, students are shuffled from classroom to classroom, each filled with rules of things they can and cannot do, with little control over their environment. For a student with sensory difficulties, this can prove extremely difficult during the day thus limiting their school performance and function.

A study by Chien and colleagues found that children with probable and definite sensory processing difficulties had lower levels of participation and enjoyment in activities when
compared to children with typical sensory processing (2016). Likewise, Sleeman and Brown found that sensory processing impacted students’ participation diversity but also impacted students’ intensity and independence levels in daily activities (2022). Teachers and educators have also reported that there is statistically significant dysfunction in school behaviors among children with sensory processing difficulties as well (Gentil-Gutiérrez et al., 2021). Another teacher and parent survey noted that sensory processing differences in children with autism impacted school performance, causing distraction, distress, and anxiety in the classroom and around school (Jones et al., 2020). Countless articles have shown that sensory processing difficulties greatly impact a student’s ability to perform in school and also in daily activities. This profound effect, combined with its concerning prevalence, makes sensory processing an imperative factor to address during the school day.

**Anxiety**

Anxiety, a state of mental health, is characterized by feelings of uneasiness, worry, and fear (Mental health for adolescents, n.d.). Anxiety presents as unpleasant feelings or tension, with apprehensive thoughts as a common symptom (Engel-Yeger & Dunn, 2011). Anxiety is considered normal when in response to a realistic threat or danger (Engel-Yeger & Dunn, 2011). Most people experience anxiety occasionally throughout their life, usually in response to a stressful situation or high-stakes decision. This is normal. However, anxiety becomes a concern when the feeling is prolonged and not in response to a viable threat or dangerous situation (Engel-Yeger & Dunn, 2011).

Mental health difficulties, specifically anxiety, are a growing area of concern among adolescents. It is estimated that 49.5% of adolescents have experienced some sort of mental health disorder (Mental health for adolescents, n.d.). In 2016 it was estimated that 11% of adolescents were currently diagnosed with anxiety disorder (Mental health for adolescents, n.d.). Following the first year of COVID-19 global pandemic, anxiety symptoms among adolescents doubled, resulting in one in five youth experiencing increased anxiety (Mental
Research has shown that anxiety greatly impacts school performance. Mazzone and colleagues found that self-reported anxiety among students had a negative correlation with school performance, indicating that higher levels of anxiety are associated with poorer academic results (2007). Russell and Topham found that social anxiety also impacted a student’s school performance through emotional distress, impairment in the learning process, and mixed coping strategies (2012). It is clear that anxiety impacts school performance and is an important factor to be addressed during the academic day.

**Role to Occupational Therapy**

With the extreme demand for students’ sensory processing and mental health needs to be addressed at school, the is one profession uniquely educated and trained in both areas, occupational therapy. Occupational therapy is the use of everyday activities as intervention to promote health and well-being in individuals (American Occupational Therapy Association [AOTA], 2020). Occupational therapists are educated and trained to address all domains of daily living (AOTA, 2020). These domains include but are not limited to education, body functions such sensory processing, and mental health concerns like as anxiety (AOTA, 2020). With a holistic approach, occupational therapists are perfectly designed to address sensory processing and mental health concerns within the context of education.

**Needs Assessment**

As stated in the literature review, both sensory processing and mental health, specifically anxiety, have a large impact on students and their academic performance. With the purpose of better understanding the needs of the school related to sensory processing, a needs assessment was completed in the summer of 2022 for this capstone.

The needs assessment was conducted through a series of discussions with school staff and observation. At the time of the initial needs assessment, individuals interviewed included
site mentor and supervisor of educational support services as well as the current supervisor of inclusion services at the time. Brief conversations also occurred with the school principal and various teachers and support staff to gain a wider perspective on the need of the school. Students were observed throughout the academic day, specifically during recess and while using the sensory rooms, also as part of the needs assessment. In summarizing the interviews, conversations, and observations, the needs of the school and school sensory rooms were revealed.

From the initial needs assessment, it was discovered that in designing the sensory rooms there was no input from experts professionally trained in sensory processing. Through conversation, it was also made known that there were widely differing ranges of sensory processing knowledge and understanding among the staff. At the time of the needs assessment, it was also unclear if students and staff had the effective tools and equipment in the sensory rooms to allow students to meet their sensory needs. These identified needs providing a starting point for this capstone.

At the beginning of the doctoral capstone experience, the needs assessment was revisited. Continued conversations were had with the new supervisor of inclusion services as well as various support staff and the school social worker. It was through these conversations that the alternate use of the sensory rooms was discovered. Due to the mental health needs to the students, the sensory rooms were also used as calming spaces. Through further observation of the two sensory rooms, it was evident that the equipment in the rooms was not addressing all eight of the sensory systems. Observation also revealed that students only used select equipment in the rooms and would benefit from both novel and intentional equipment to address their needs.

With the information collected from the needs assessment conducted in the summer of 2022 and upon initiation of doctoral capstone experience in January of 2023, the focus of this capstone shifted to address both sensory processing and mental health needs at GRCMS. The
needs to be addressed included evidenced-based resources to ensure effective utilization of sensory rooms, education on sensory processing and mental health from the occupational therapy perspective, and the opportunity for additional equipment to support all sensory systems as well as mental health needs in the sensory rooms.

**Objectives Achieved during the Capstone**

To guide this capstone, three main objectives were created following the results of the literature review and needs assessment. With each main objective, a series of smaller objectives were created to aid in the completion of the main objective and further guide this capstone. The table below details the objectives for addressing sensory processing and mental health needs at GRCMS.

<table>
<thead>
<tr>
<th>Main Objective</th>
<th>Sub-objectives</th>
</tr>
</thead>
</table>
| 1. During the 14-week capstone experience, student will identify 3 or more evidence-based additions to the sensory rooms at Grand Rapids Christian Middle School. | 1i. Student will utilize evidence-based research to inform decision making in choosing 3 or more equipment pieces or tools for the sensory rooms at Grand Rapids Christian Middle School in 7 weeks.  
1ii. Student will visit 3 or more schools with sensory rooms and identify 1 idea to implement at Grand Rapids Christian Middle School in 5 weeks.  
1iii. Student will identify supplier, cost, and plan for installation of each piece of sensory equipment/tool in 3 weeks. |
| 2. Student will educate staff and students on efficient and effective utilization of the updated sensory rooms with at | 2i. Student will inventory and implement an organization system into sensory rooms to improve ease of use of sensory tools and techniques in 2 weeks.  
2ii. Student will create 3 or more handouts for teachers and staff detailing. |
Objective One

The first main objective, regarding evidence-based equipment to be added to the sensory rooms, was the focus of the first seven weeks of the capstone. To ensure that the equipment to be potentially added to the sensory rooms was viable and useful, an extensive literature review was conducted on this topic. A variety of databases were searched, along with
reputable websites, using various keywords to reveal for the most relevant data on both sensory processing and mental health. The table below lists the databases and websites searched as well as keywords used to produce the literature.

<table>
<thead>
<tr>
<th>Databases:</th>
<th>ProQuest Health and Medical Complete, Pubmed, National Institutes of Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Websites:</td>
<td>AOTA, AJOT, Autism Speaks, Autism Society, National Autism Resources, Snoezelen, Every Movement Counts</td>
</tr>
<tr>
<td>Keywords:</td>
<td>Sensory processing, sensory rooms, school-based, tactile, auditory, olfactory, proprioception, interoception, vestibular input, heavy work, anxiety, yoga</td>
</tr>
</tbody>
</table>

From this literature review, it was revealed that a majority of information on sensory processing is not conclusive. Each keyword had varying degrees of evidence to support or not support the efficacy of intervention. Many articles alluded the uniqueness of sensory processing for each individual, making it difficult to draw conclusions on sensory interventions and activities. Despite the limited conclusiveness of the research, this in-depth literature review was helpful in taking a deeper look at potential sensory equipment for GRCMS’s sensory rooms. The literature review provided ideas for potential sensory equipment that could be beneficial to students at GRCMS.

Along with the literature review, visiting other schools’ sensory rooms helped guide the decision-making process for identifying additional sensory equipment to be added to the GRCMS sensory rooms. The following schools’ sensory rooms were visited and observed with the hopes of identifying additional equipment for GRCMS sensory rooms: Kelloggsville Early Childhood Learning Center, Westside Christian School, Ada Christian School, Grand Rapids Christian Elementary School, and Grand Rapids Christian High School. Each sensory room was unique to the population of students it served but all provided various ideas of equipment that would aid in the renovation of GRCMS sensory rooms. Some of the viable options included
essential oil diffusers to address olfactory sensory system, a floor gaming/rocking chair for vestibular input, organizational items to create a simplified visual space, fidgets for tactile input and more.

With the results of the literature review and the recommendations from other schools, thirteen pieces of equipment were selected during the final weeks of the doctoral capstone to be added to the GRCMS sensory rooms through grant proposals. Student recommendation and needs also weighed heavily in the decision-making process. For example, some students expressed the desire for a pull-up bar in the sensory rooms. Because a pull-up bar provides proprioceptive and tactile sensory information, a wall-mounted, foldable pull-up bar was selected as one of the additions for the sensory room. To aid in the organization and visual simplicity of the sensory rooms, therapy ball organizers as well as yoga mat storage containers were chosen. Essential oil rollers and supplies were also selected to address the olfactory sensory system and sensory brushes, Squigz, and theraputty were picked to address the tactile sensory system. Yoga mats were chosen to allow students a designated spot to practice yoga and mental health techniques such as breathing and mindfulness exercises. A Bluetooth speaker was selected as well to address the auditory system and allow the opportunity for calming music to be played in the sensory rooms. All items were selected intentionally, with the purpose of addressing gaps in the sensory to meet both sensory processing and mental health needs.

Objective 2

In order to provide effective education to staff and students, an inventory of both sensory rooms was completed. Inventoring and organizing the sensory rooms allowed for record of what equipment was available and also helped identify gaps in equipment. For example, following the inventory, it was noted that a majority of the equipment aimed to address the tactile and vestibular system. It was also noted that nothing in either sensory room was focused on
addressing the auditory or olfactory systems. The gustatory system was not addressed either out of concern for cleanliness and student health.

Following the inventorying and the in-depth literature review, weeks six through thirteen were spent creating educational materials for staff and students on sensory processing and mental health. Staff had the option of attending one of three presentations, providing education on sensory processing and how to address it in the classroom and sensory rooms. This presentation also addressed anxiety and provided tips for decreasing anxiety from the occupational therapy perspective. Along with the presentation, staff were given documents to aid in observation and identifying sensory processing dysfunction (over-responsivity and under-responsivity) in each sensory system. Tips for making classroom and environmental modifications were also listed to correspond with each sensory system. Lastly, the staff was provided with a sensory processing questionnaire, created by the doctoral capstone student, and inspired from Lucy Miller’s book, *Sensational Kids* (2014). During the presentations, staff were instructed on how to use the sensory processing questionnaire as well as how to score and interpret the questionnaire.

Several educational materials were also created for the students to aid in using the sensory rooms efficiently and effectively. A sensory room binder was created, introducing sensory processing and the Zones of Regulation. Because students independently use the sensory rooms in most cases, the decision was made to also introduce an aspect of self-regulation with the sensory activities. The Zones of Regulation, a material already in use at the school, provided a framework for building self-awareness of feelings and internal state through four zones (Kuypers, 2023). Incorporating the Zones of Regulation with sensory processing encouraged students in their journey to understanding what their needs for regulation, both sensory and mental, during the academic day. Sensory cards, cards with sensory-based activities, were created to offer a variety of activities that could be completed in the rooms with the available equipment. Some of the cards corresponded with a specific zone of regulation to
allow students to choose an activity based on their current state of regulation or current zone. To address both sensory needs and mental health needs, yoga cards were constructed, detailing yoga poses from easy to difficult. An emphasis on interoceptive awareness was added to the yoga cards with the inclusion of a question at the bottom of each card, encouraging the student to attend to their internal body feelings and signals. Breathing exercise and grounding exercise visuals were also made for students to address anxiety and mental health concerns. Calming cards, inspired from Every Movement Counts, were created to allow students quick access to anxiety reducing activity ideas (Calm movement cards, 2023). All of these materials were available to students in the sensory room binders to encourage intentional use of the rooms throughout the academic day.

To further student knowledge and understanding of sensory processing and mental health, group discussions were held for seventh and eighth graders. With anxiety being the biggest concern for these groups, the students were taught how to complete breathing exercises as a way of reducing anxiety and stress. Yoga classes were also held for the seventh and eighth graders as another tool for reducing anxiety and addressing interoceptive awareness during the academic day.

**Objective 3**

The last few weeks of this capstone focused on finding grant opportunities and submitting grant proposals for the previously mentioned, additional equipment for the sensory rooms. Through a long search, two private foundations were identified as a good match for the school and the project.

Of the two foundations identified, one grant proposal was completed for the above-mentioned equipment identified through the literature review, school visits, and student request. The second grant proposal was completed for Bal-A-Vis-X training for the inclusion and educational support staff. During the literature review conducted within the first seven weeks of the capstone, Bal-A-Vis-X came up as a sensory intervention to address balance (vestibular
sensory system), auditory (sensory system), and vision (sensory system). The research stated that not only does Bal-A-Vis-X improve balance, auditory listening, and visual tracking but it can improve sustained attention in the classroom setting (Watson-Grace & Provident, 2020). After further research and conversation with staff, it was decided that training in Bal-A-Vis-X exercises would provide another tool for both inclusion and educational support staff when working with student. Therefore, the second grant included funding for Bal-A-Vis-X training as well as the necessary equipment for the training.

Lastly, an ordering plan was creating for each item of the grant proposals. Directions were written out for how to contact Bal-A-Vis-X trainer and schedule a training as well as how to order the necessary equipment if the grant was approved. Directions were also provided for order the additional sensory room equipment if that grant were to be approved as well. This was to ensure the continuity of the doctoral capstone project and to not burden the site upon completion of this program.

**Implications of the Capstone**

As a result of the completion of this capstone, the biggest implication for GRCMS was the education and materials provided on sensory processing and anxiety. At the start of this capstone, the staff at GRCMS had varying amounts of knowledge pertaining to sensory processing and how to use the sensory rooms. Through educational presentations and materials such as sensory cards, sensory processing questionnaires, and more, the staff at GRCMS have a full and uniform knowledge base on sensory processing and anxiety. Having a good grasp of sensory processing has allowed the staff at GRCMS to better met the sensory needs of the students, including intentional use of the sensory room along with appropriate modifications and accommodations for sensory processing needs.

Another implication as a result of this capstone at GRCMS, was potential for more sensory equipment as well as training for staff. Because the grants were the last objective completed during this capstone experience, the results of each of the grant proposals remains
uncertain. If they grants are approved, the school will be granted much needed equipment for
the sensory rooms to better meet the needs of the students. The staff would also receive Bal-A-
Vis-X training to provide them with another tool for meeting student needs throughout the
academic day.

The last implication of the capstone was effective and independent use of the sensory
room by the students. Prior to this capstone, use of the sensory rooms was student-led with
limited understanding of sensory and calming activities. Now, with the use of sensory cards and
calming cards, students can be intentional with the activities they choose to do in the sensory
rooms to increase their effectiveness.

In order to ensure the longevity of the capstone, all staff who attended the educational
presentations were provided digital copies of all the educational materials on sensory
processing and mental health. This allowed all staff to have unlimited access to the materials.
Second, a Google Drive with all produced materials was created and shared with the supervisor
of educational support services, the supervisor of inclusion services, the school social worker,
and more to ensure continued access to all materials. Each document was saved to the Google
Drive twice, once as a modifiable Word document and once as a PDF for printing. This would
allow for easy printing of the PDFs as well as modification of materials in the Word document as
needed. Lastly, in the case that the grants were approved, directions for ordering and installing
equipment was left with site mentor and included quantity of items, links to equipment, and
more. Directions were also left for setting up Bal-A-Vis-X training and ordering training
equipment. Great care was taken to ensure the continuity of the work completed for this
capstone.

**Conclusion**

Occupational therapy offers the unique opportunity to holistically address all aspects of
daily life including both sensory processing and mental health within the context of school. This
capstone at GRCMS provided education for staff and students on both sensory processing and
mental health. Supporting materials were created and supplied to the staff and students to encourage effective and intentional use of the sensory rooms for both mental health and sensory processing needs. The school was also provided with the opportunity for much needed funding for sensory room equipment and staff training. All of these accomplishments completed during the doctoral capstone experience addressed the unmet sensory processing and mental health needs at GRCMS through the lens of occupational therapy.
References

  https://everymomentcounts.org/about/


  https://everymomentcounts.org/calm-moments-cards/


Watson-Grace, A., & Provident, I. (2020). Improving selective attention for all students with

https://doi.org/10.1080/19411243.2020.1769000
## Appendix A
Sensory Processing Dysfunction Tips

### Sensory Processing Dysfunction Tips

#### Sensory Over-Responsivity

##### Auditory

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently covers ears Puts hood over head</td>
<td>Wear beanie or headband to dampen noise</td>
</tr>
<tr>
<td>Runs or flees from loud noises</td>
<td>Allow noise cancelling headphones during independent work</td>
</tr>
<tr>
<td>Bothered or distracted by background environmental noise</td>
<td>Limit auditory distractions</td>
</tr>
<tr>
<td>Prefers or request a quiet environment</td>
<td>Use white noise to drown out environmental sounds</td>
</tr>
<tr>
<td>Easily distracted by sounds not noticed by others</td>
<td>Provide advanced notice of fire drills and assemblies</td>
</tr>
<tr>
<td>Dislikes to go to areas with a lot of noise</td>
<td>Keep classroom door closed</td>
</tr>
<tr>
<td>Bothered when someone is talking while they are trying to concentrate</td>
<td>Provide written instructions to supplement verbal information</td>
</tr>
</tbody>
</table>

##### Tactile

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appears fearful of standing too close to others</td>
<td>Respect their personal space</td>
</tr>
<tr>
<td>Responds emotionally to light or unexpected tough</td>
<td>Allow the student to be in front or end of lines</td>
</tr>
<tr>
<td>Avoids certain textures</td>
<td>Preferential seating in the back row or to the side</td>
</tr>
<tr>
<td>Prefers to touch rather than be touched</td>
<td>Provide locker at the end of the row</td>
</tr>
<tr>
<td>Sensitive to certain types of clothing</td>
<td>Do not approach from behind</td>
</tr>
<tr>
<td>Overreacts to temperature Bothered by messy hands</td>
<td>Avoid bumping or light touch</td>
</tr>
</tbody>
</table>
### Olfactory

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Notices or reacts negatively to smells not noticed by others</td>
<td>• Place favorite scent on piece of material to override undesirable smells</td>
</tr>
<tr>
<td>• Irritated by smell of perfumes, lotions, cologne, candles, etc.</td>
<td>• Do not wear perfume or cologne</td>
</tr>
<tr>
<td>• Sensitive to smells from food</td>
<td>• Avoid using scented products</td>
</tr>
<tr>
<td>• Smelling odors others cannot smell</td>
<td>• If using scented products, keep the scent the same</td>
</tr>
<tr>
<td>• Place favorite scent on piece of material to override undesireable smells</td>
<td></td>
</tr>
<tr>
<td>• Do not wear perfume or cologne</td>
<td></td>
</tr>
<tr>
<td>• Avoid using scented products</td>
<td></td>
</tr>
<tr>
<td>• If using scented products, keep the scent the same</td>
<td></td>
</tr>
</tbody>
</table>

### Visual

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Avoids eye contact</td>
<td>• Dim lights with light covers</td>
</tr>
<tr>
<td>• Rubs eyes often</td>
<td>• Use curtains or blinds over windows</td>
</tr>
<tr>
<td>• Complains of headaches after reading, writing, or computer use</td>
<td>• Decrease visual clutter and distractions</td>
</tr>
<tr>
<td>• Has watery eyes frequently</td>
<td>• Provide reading guide</td>
</tr>
<tr>
<td>• Covers or shades eyes from lights</td>
<td>• Graph paper in math</td>
</tr>
<tr>
<td>• Notices everything going on in the room</td>
<td>• Preferential seating away from doorway and window</td>
</tr>
<tr>
<td>• Difficulty copying from a board with a lot of information on it</td>
<td>• Decrease amount of information printed on one page</td>
</tr>
<tr>
<td>• Has a hard time keeping eyes focused on a task/ activity for an appropriate amount of time</td>
<td>• Neutral classroom colors</td>
</tr>
<tr>
<td>• Easily distracted by visual stimuli</td>
<td></td>
</tr>
</tbody>
</table>
## Vestibular

<table>
<thead>
<tr>
<th>Student Observations</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fearful of walking on uneven surfaces or going up and down stairs</td>
<td>• Move slowly when walking with them</td>
</tr>
<tr>
<td>• Dislikes playground equipment</td>
<td>• Place objects at arm level</td>
</tr>
<tr>
<td>• Does not like activities where feet level the ground</td>
<td>• Foot stool when feet don’t reach the ground</td>
</tr>
<tr>
<td>• Prefers sedentary tasks</td>
<td>• Allow varied body positions when completing work such as a bean bag or therapy ball</td>
</tr>
<tr>
<td>• Moves slowly and cautiously</td>
<td></td>
</tr>
<tr>
<td>• Losses balance easily</td>
<td></td>
</tr>
<tr>
<td>• Dislikes head movement</td>
<td></td>
</tr>
<tr>
<td>• Turns whole body when looking at something</td>
<td></td>
</tr>
</tbody>
</table>

## Proprioceptive

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bumps into things or people frequently</td>
<td>• Assign tasks involving lifting and carrying heavy items</td>
</tr>
<tr>
<td>• Knocks things over often</td>
<td>• Encourage a heavy backpack</td>
</tr>
<tr>
<td>• Difficulty turning doorknobs and opening and closing items</td>
<td>• Wipe tables</td>
</tr>
<tr>
<td>• Has a hard time learning exercises and dance routines</td>
<td>• Erase white</td>
</tr>
<tr>
<td>• Has a hard time learning exercises and dance routines</td>
<td>• Weighted lap pads for seated work</td>
</tr>
<tr>
<td>• Leans or flops onto things</td>
<td>• Sit with back against wall</td>
</tr>
</tbody>
</table>
## Sensory Under-Responsivity

### Auditory

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Does not respond to their name when called (needs to be touched to get attention)</td>
<td>• Place student in class with energetic teacher</td>
</tr>
<tr>
<td>• Does not respond to normal speaking volume (must speak loudly to gain attention)</td>
<td>• Wear headphones with upbeat music</td>
</tr>
<tr>
<td>• Likes excessively loud music, games, TV Often speaks in a loud voice</td>
<td>• Provide directions in written format</td>
</tr>
<tr>
<td>• Needs direction repeated often or will say “what” frequently</td>
<td>• Record lectures of re-listening later</td>
</tr>
<tr>
<td>• Talks self through tasks</td>
<td>• Give student a task that involves talking such as making announcements, reading, etc.</td>
</tr>
<tr>
<td>• Appears oblivious to certain sounds</td>
<td></td>
</tr>
</tbody>
</table>

### Tactile

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clothes are often twisted on their body</td>
<td>• Allow fidgets with proper use</td>
</tr>
<tr>
<td>• Does not notice pain Touches everything and everyone</td>
<td>• Consider use of hands-on activities</td>
</tr>
<tr>
<td>• Likes to put things in their mouth</td>
<td>• Use gel roller pens</td>
</tr>
<tr>
<td>• Unaware when they are bumped</td>
<td>• Allow note taking on a keyboard</td>
</tr>
<tr>
<td>• Picks at skin, nails, and scabs</td>
<td>• Use paper with raised, tactile lines</td>
</tr>
<tr>
<td></td>
<td>• Velcro strip under desk to touch</td>
</tr>
</tbody>
</table>
### Olfactory

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Does not notice noxious smells</td>
<td>• Essential oil cotton balls or essential oil scent rollers to smell</td>
</tr>
<tr>
<td>• Inappropriately smells new objects, toys, or people</td>
<td>• Encourage a smelly lip balm or gloss</td>
</tr>
<tr>
<td>• Has difficulty discriminating unpleasant odor</td>
<td>• Allow fresh air breaks</td>
</tr>
<tr>
<td>• Desires to smell strong odors excessively</td>
<td></td>
</tr>
</tbody>
</table>

### Visual

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Often loses place while reading or doing math problem</td>
<td>• Use bright lights and colors Use visual schedules</td>
</tr>
<tr>
<td>• Writes at a slant</td>
<td>• Preferential seating</td>
</tr>
<tr>
<td>• Fatigues easily with reading, writing, drawing, video games, etc.</td>
<td>• Highlight materials</td>
</tr>
<tr>
<td>• Difficulty following and tracking objects with eyes</td>
<td>• Use a variety of fonts</td>
</tr>
<tr>
<td>• Has a hard time judging spatial relationships in the environment</td>
<td>• Work on puzzles like Sudoku, word searches, mazes, etc.</td>
</tr>
<tr>
<td>• Often stares at people or objects</td>
<td></td>
</tr>
<tr>
<td>• Does not notice when people enter a room</td>
<td></td>
</tr>
</tbody>
</table>

### Vestibular

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Appears to be in constant motion and cannot sit still</td>
<td>• Break involving jumping jacks and chair push ups</td>
</tr>
<tr>
<td>• Loves to swing or spin</td>
<td>• Clear floor from clutter</td>
</tr>
<tr>
<td>• Craves fast movement such as running, jumping, hoping</td>
<td>• Assign tasks in class such as handing out papers, putting chairs away</td>
</tr>
<tr>
<td>• Rocks, shakes legs, or moves head when sitting</td>
<td></td>
</tr>
</tbody>
</table>
### Proprioceptive

<table>
<thead>
<tr>
<th>Student Observations:</th>
<th>Tips:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unable to use hands or feet for task without looking at them</td>
<td>• Assign tasks such as putting up or away chairs, carrying heavy things, sweeping, erasing white boards</td>
</tr>
<tr>
<td>• Seeks out jumping, bumping, and crashing activities</td>
<td>• Provide a bean bag chair</td>
</tr>
<tr>
<td>• Kicks feet on floor or chair while sitting</td>
<td>• Use weighted lap pads</td>
</tr>
<tr>
<td>• Prefers tight clothing and likes heavy blankets</td>
<td></td>
</tr>
<tr>
<td>• Chews on things</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Presentation Notes

Psalms 139: 13-14 NIV

For you created my inmost being;
you knit me together in my mother’s womb.
I praise you because I am fearfully and wonderfully made;
your works are wonderful,
I know that full well.

Sensory processing is recognizing, interpreting, organizing, and responding to sensory information.

Our bodies process visual, gustatory, olfactory, auditory, tactile, proprioceptive, vestibular, and interoceptive input.

**Visual** system – detects contrast, edges, and movement so that we can interact meaningfully with the environment, socialize and learn

**Gustatory** system – detects chemicals of food to provide information on the things that enter our mouth

**Olfactory** system – registering chemicals in the air that we smell and classifying them into something we are either familiar with or not familiar with

**Auditory** system – locates, captures, and discriminates sound

**Tactile** system – interprets what is in contact with your body and skin and provides information related to pain, pressure, temperature, movement, size, texture, shape, etc.
Proprioceptive system – detects where body parts are relative to another (unconscious awareness of body positioning)

Vestibular system – detects where our body is in relation to the ground (gravity) and provides information on our body’s positioning in space (balance, movement, and coordination)

Interoception system – detects how our body feels internally such as heart rate, respiratory rate, hunger, thirst, etc.

Sensory processing dysfunction refers to individuals who have difficulty processing sensory information, so much so that it interferes with their daily functioning.

Sensory over-responsivity refers to individuals who are more sensitive to sensory information and have a low threshold for the information.

Sensory under-responsivity refers to individuals who are less responsive to sensory information and have a higher threshold for the information.

Sensory processing dysfunction can affect anyone but especially those with:

- ADD
- ADHD
- Down syndrome
- Fetal alcohol syndrome
- Pre-term birth
- Trauma

Our body needs to process sensory information without difficulty in order to stay calm and feel safe.

Difficulty organizing sensory information causes the brain to work harder to remain calm and feel safe.

Higher cortical processing functions are dependent on adequate processing and organizing of sensory information.
Sensory processing dysfunction symptoms can be seen as:

- Behavioral issues
- Emotional problems
- Motor difficulties
- Poor or limited social participation
- Attentional problems
- Poor self-regulation
- Poor self-esteem

We need our brain to process sensory information in order to use higher cortical processes for academic learning.

**Heavy work** can be an effective way to address sensory processing dysfunction and involves increased pressure through the joints so pushing, pulling, or lifting heavy things.

**Linear** vestibular input can have calming effect while **rotational** vestibular input can have an alerting effect.

Research shows a **correlation between anxiety and sensory processing**, specifically sensory over-responsivity, in some individuals.

Interoceptive sensitivity and elevated awareness is seen in individuals with anxiety.

Some tools that are effective for addressing anxiety and stress:

- Yoga
- Breathing exercises
- Grounding exercises
- Mandala coloring

**Helpful resources** to aid your sensory processing learning:

- Kelly Mahler Interoception Curriculum
- Sensational Kids by Lucy Jane Miller (2006)
- OT Toolbox
- The Inspired Treehouse
Appendix C

Sensory Processing and Mental Health Presentation

Sensory Processing and Mental Health in the Middle School Setting

Kate Bergsma (Vande Vegte), OTD Student
Western Michigan University

Psalms 139: 13–14 NIV

For you created my inmost being;
you knit me together in my mother’s womb.
I praise you because I am fearfully and wonderfully made;
your works are wonderful, I know that full well.
What is sensory processing?

- Recognizing
- Interpreting
- Organizing
- Responding

What sensations do we process?

- Visual
- Gustatory
- Olfactory
- Auditory
- Tactile
- Proprioceptive
- Vestibular
- Interoceptive
Proprioception

• Unconscious awareness of body positioning

• Tells where all body parts are in relative to others

• Information is received from receptors in joints, muscles, ligaments, and connective tissue

Vestibular

• Tells where our body is in relation to the ground

• Provides information on position in space, balance, movement, and coordination

• Located in the inner ear
**Interoception**

• Tells us how our body feels internally

• Unconscious and conscious

• Examples include heart rate, respiratory rate, hunger level, thirst level, need to go to the bathroom

---

**Sensory Processing Dysfunction**

Everyone processing sensory information differently. We all have certain sensory preferences and sensations we dislike.

Some individuals have a much harder time processing daily sensory information. We call that sensory processing dysfunction.
Sensory OVER-Responsivity

Sensory UNDER-Responsivity

Over-Responsivity

• More sensitive to sensory information
  • Low threshold
Under-Responsivity

- Less responsive to sensory information
- High threshold

Who can sensory processing dysfunction affect?

- ASD
- ADHD
- Down syndrome
- Pre-term birth
- Fetal alcohol syndrome
- Trauma
- Typically developing
Why is this important?

We need our body to work together to process sensory information in order to stay calm, feel safe and grow.

Difficulty organizing sensory information causes the brain to work extra hard to feel safe and calm.

Higher cortical processing functions are also dependent on adequate processing and organization of sensory stimuli.

Sensory processing dysfunction can result in:

- Behavioral issues
- Emotional problems
- Attentional problems
- Motor difficulties
- Social participation
- Self-regulation
- Self-esteem
**Why does this matter in school?**

- We need our brain to properly process sensory information in order to use higher cortical levels of our brain
- Decreased participation in school and school-related activities.
- Impacts independence level and even maturity
- Can affect ability to perform school tasks

---

**How can we address this in the classroom?**

Depends on the student!

- What sensory type?
- What sensory system?
Tips from an OT:

- Heavy work
- Linear vestibular input
- Caution with rotational vestibular input

Are anxiety and sensory processing related?

- Correlation between anxiety and sensory processing
  - Interoceptive awareness sensitivity
Tools for anxiety:

- Yoga
- Breathing exercises
- Grounding exercises
- Coloring

Doctoral Capstone

Researching

Collaborating

Educating

Seeking
Materials created:

• *Sensory processing scale questionnaire* for parents/guardians

• *Sensory room binder*
  • Zones of Regulation
  • Sensory cards
  • Yoga cards
  • Calming cards
  • Breathing exercises
  • Grounding exercises

![The ZONES of Regulation™](image)
• Number relates to difficulty

• Blue – calming
• Yellow – alerting
• Green – focusing
**SENSORY PROCESSING & MENTAL HEALTH IN SCHOOL**

**CALMING CARD**
**Breathing Exercise**
Take a slow, deep breathe in, through your nose, like you are smelling a flower. Now, breathe out slowly, through your mouth, like you are blowing out candles. Repeat 5 times.

**CALMING CARD**
**Bear Hug**
Wrap your arms around yourself and give yourself a tight "bear" hug. Squeeze your arms around yourself as tight as you can and count to 20. Repeat 5 times.

**CALMING CARD**
**Color**
Find a coloring page you want to color. Take a close look at the page. Now, close your eyes and imagine the colors you want to use. Find those colors in the colored pencils and be creative.

**CALMING CARD**
**Yoga**
Pick 3-5 yoga poses from the deck of yoga cards in the room. Clear a spot in the room with enough room for each of the poses. Hold each pose for 30 seconds. Repeat again if needed.
Grants

• *Bal-A-Vis-X training*

• *Sensory room equipment:*
  - Organizational equipment
  - Bluetooth speaker
  - Yoga mats
  - Theraputty
  - Essential oil rollers
  - Rocker (gaming) chair
  - Sensory brushes
  - Squigz and pop-beads
  - Pull up bar
Other Resources

- Kelly Mahler Interoception curriculum
- Sensational Kids by Lucy Jane Miller (2006)
- OT Toolbox
- The Inspired Treehouse
- Every Movement Counts

Questions?

Thank you for attending this presentation!
References

* MORE RESEARCH AVAILABLE ON REQUEST
This book is designed for everyone who uses the sensory room! This book will go through what sensory processing is and the Zones of Regulation used to monitor our emotions and provide helpful sensory and anxiety-decreasing activities!
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WHAT is sensory processing?

Sensory processing is how we **recognize, interpret, organize, and respond** to daily sensory information.

Sensory processing is how the brain receives and responds to sensory information.

Sensory information (also known as "sensations" or "senses") includes everything we see, touch, hear, smell, taste, and more.

We all process and respond to these sensations differently. Some of us are more sensitive and responsive to sensory information. Some of us are less sensitive and less responsive to sensory information. That is okay!
Our EIGHT different sensory systems

You might be surprised to learn that there 8 different types of sensory information that we process. Each of these belong to their own sensory system that interprets and organizing a specific type of sensory information.

The first 5 sensory systems you are likely very familiar with.

1. Visual
   - This includes everything our eyes take in and allows us to notice contrast, edges, and movement.

2. Auditory
   - This includes everything we hear and allows us to locate sound, capture sound, and differentiate sound.

3. Tactile
   - This includes anything that touches our skin and provides information on pain, pressure, temperature, movement, size, texture, and shape.

4. Gustatory
   - This includes everything we taste and provides us with information about what we eat and drink.

5. Olfactory
   - This includes what we smell through our noses and allows us to categorize smells into things we are familiar with and things we are not familiar with.
The last 3 sensory systems are probably new to you. These sensory systems are equally as important as the other ones and are very powerful in our day to day lives.

6. Vestibular
   - This system tells us where our body is in relation to gravity (or the ground) and provides us information on our positioning, balance, movement, and coordination.

7. Proprioceptive
   - This system informs us of our body positioning and tells us where all our body parts are relative to others and how they are moving.

8. Interoception
   - This system tells us how our organs are feeling and lets us know our heart rate, respiratory (breathing) rate, hunger level, thirst level, our need to go to the bathroom and more.

These are the 8 sensory systems that make up all the sensory information we process on a daily basis.
WHY does sensory processing matter?

Our body needs to work together to process all sensory information in order to make us feel calm and safe and allow us to grow.

When we have a hard time processing sensory information, it can lead to difficulties in regulating emotions and behavior, paying attention, and more.

This can impact our ability to participate in school activities. If we have a difficult time processing sensory needs throughout the day, it can cause us to not pay attention in class, have a hard time sitting still, respond differently to lights and sounds, and more.

The sensory room is intended to help you process sensory information and met your sensory needs.
RULES for the sensory room

In order to keep you and others safe in the sensory rooms, there are a few rules to follow. These rules are meant to ensure safety and appropriate use of the sensory room.

1. You must notify an adult that you will be in the sensory room.

2. Only 3 students allowed in the sensory room at a time.

3. Use your time AND the equipment wisely.

4. iPads must stay inside backpack or outside of the sensory room.

5. Safe play only.

6. *Clean up before leaving.*
TIPS for using the sensory room

The sensory rooms at GRCMS were created for an intentional purpose. They were created to allow students to take a break and meet their sensory needs in order to learn throughout the day. Because these rooms were made intentionally, we must use it intentionally.

Using the sensory rooms intentionally means:

- The sensory rooms are not hang-out rooms and must be used for the right purposes.
- Time in the sensory room is precious and it is beneficial to use your time wisely.
- Pick intentional activities that will prepare your mind and body for learning.
The ZONES of Regulation

The zones of regulation provide us with a simple way to talk about our emotions and feelings. It helps us name certain ways we may be feeling and allows us categorize them for better understanding of our emotions.

**ALL zones are okay zones to be in.** The zones describe how we feel on the inside and it is okay to be in different zones in different situations.

With the Zones of Regulation:

- There is **NO bad zone**.
- Our zone is defined by the feelings and internal states we experience on the inside.
- Our **behavior is a byproduct** of how we manage our zones.
- By learning to understand our emotions we can **learn to regulate** them.
The blue zone lets us know that our body is running a little slow. In this zone, we have a low state of alertness.

Some examples of emotions associated with the blue zone include:

- Sad
- Sick
- Tired
- Bored
- Moving slowly
- Hurt
- Depressed
- Exhausted
- Shy
- Stressed
- Concerned
- Pessimistic
The GREEN Zone

The green zone is when our body is doing just right. In this zone, we have the ideal level of alertness. We are ready to learn in this zone.

Some examples of emotions associated with the green zone include:

- Happy
- Calm
- Feeling okay
- Focused
- Relaxed
- Content
- Hopeful
- Comfortable
- Proud
- Grateful
- Joyful
- Inspired
- Motivated
- Cheerful
The YELLOW Zone

The yellow zone is when our energy levels feel slightly elevated but we still have control over our internal emotions. In this zone, we have a heightened level of alertness.

Some emotions associated with the yellow zone include:

- Frustrated
- Worried
- Silly/wiggly
- Excited
- Some loss of control
- Nervous
- Worried/anxious
- Annoyed
- Embarrassed
- Overwhelmed
- Jealous
- Upset
- Scared
- Confused
- Hyper
The RED Zone

The red zone is when you feel out of control. In this zone, we have an extremely heightened state of alertness.

Some emotions associated with the red zone include:

- Mad/angry
- Terrified
- Elated/ecstatic
- Devasted
- Out of control
- Overjoyed
- Furious
- Panicked
- Wild
- Enraged
- Argumentative
Zones of Regulation CHECK-IN

Why should we use the Zones of Regulation in the sensory room?

We can use the Zones of Regulation to better understand our emotions and behaviors and we can also use them as a check-in before using the sensory room.

By checking what zone you are in before using the sensory room, we can pick certain activities within each zone that will help prepare our mind and body to learn (and hopefully allow us to

Let's start by asking:

“what zone am I in right now?”

The ZONES of Regulation™

BLUE ZONE
- Sad
- Sick
- Tired
- Bored
- Moving Slowly

GREEN ZONE
- Happy
- Calm
- Feeling Okay
- Focused
- Relaxed

YELLOW ZONE
- Frustrated
- Worried
- Silly/Wiggly
- Excited
- Loss of Some Control

RED ZONE
- Mad/Angry
- Terrified
- Elated/Ecstatic
- Devastated
- Out of Control
BLUE Zone activities

You’re in the blue zone and that is okay! To ensure that you are ready to learn, pick some sensory activities that will help you move from the blue zone to the green zone.

You can find the deck of sensory cards and pick some blue zone sensory card or pick from the activities below:

- Jump on the trampoline
- Play a fast-paced game or card game
- Spin on the swing
- Play some upbeat music
- Bowl with weighted ball
- Make an obstacle course
- Drink cold water
- Bounce on therapy ball
GREEN Zone activities

You’re in the green zone and that is great! Let’s make sure you stay in the green zone so that you can continuing learning.

You can **find the deck of sensory cards** and pick some green zone sensory card or pick from the activities below:

- Squeeze a stress ball
- Play with some fidgets
- Do a puzzle
- Play a game
- Shoot hoops at the mini-basketball hoop at the back of the door
- Watch the visual sensory toys
- Color
- Spin around
YELLOW Zone activities

You’re in the yellow zone and that is okay! To ensure that you are ready to learn, pick some sensory activities that will help you move from the yellow zone to the green zone.

You can find the deck of sensory cards and pick some yellow zone sensory card or pick from the activities below:

- Swing side to side or front to back
- Bounce and catch a weighted ball
- Scooter board on your stomach
- Hopscotch with liquid tiles
- Animal walks
- Theraband pulls
- Play calming music
- Yoga
RED Zone activities

You’re in the red zone and that is okay! To ensure that you are ready to learn, pick some sensory activities that will help you move from the red zone to the green zone or the yellow zone.

You can find the deck of sensory cards and pick some red zone sensory card or pick from the activities below:

- Swing front to back or side to side
- Jump and crash into bean bag
- Therapy ball roll outs
- Weighted ball slams
- Bean bag punches
- Weighted blanket while sitting on bean bag
- Wall push-ups
**OTHER sensory ideas**

Here are some other sensory activities to choose from.

- Play the keyboard
- Breathing exercises
- Animal walks
- Dance party
- Watch the lava lamp
- Bear hug
- Grip strengtheners
- Wrist weights while drawing
WHAT about anxiety?

What is anxiety?

Anxiety is a little different. Anxiety is a feeling of fear and uneasiness that is difficult to shake. It can be present in all of the zones. Because anxiety itself is a little different, how we address it in the sensory room is a little different as well.

Some helpful activities for decreasing anxiety are yoga, breathing, exercises, grounding exercises, positive affirmations, and more.

Find the calming cards in the sensory rooms for some ideas to address anxiety or stress or read on for other ideas.
**YOGA and anxiety**

Yoga is a research-proven way to de-stress. Yoga involves a series of exercises (also known as poses). Yoga helps individuals build strength and improve their flexibility.

Find the yoga cards and pick 5-10 poses you would like to try. Hold each pose for 30-60 seconds.

It is okay to dim the lights in the room or close your eyes while you are in each pose.

Try to slow your breathing down while breathing in through your nose and out through your mouth.
BREATHING EXERCISES and anxiety

Breathing exercises are also proven to decrease anxiety and stress. Breathing exercises involve slowing your breath down and inhaling through your nose and exhaling through your mouth.

The most common method for breathing exercises is the 4-7-8 method.

With this exercise, you breathe in through your nose for 4 seconds (count to 4 slowly), hold your breath for 7 seconds (count to 7 slowly), and breathe out through your mouth for 8 seconds (count to 8 slowly).

Repeat this at least 4 times.
GROUNDING EXERCISES and anxiety

Grounding exercises help bring your mind and thoughts back to reality. They “ground” you in the present instead of thinking or worry about the past or the future.

Grounding exercises can also be helpful for anxiety and stress.

To complete a grounding exercise, name 5 things you can see, name 4 things you can feel, name 3 things you can hear, name 2 things you can smell, and name 1 thing you can taste.

Grounding exercises help decrease stress but are also a great sensory exercise by challenging 5 of your senses.
Sensory cards

Check in this pocket for the sensory cards.

You can pick a card based on what zone you are in OR you can pick a gray sensory card at random.

- Pink card – Red Zone
- Yellow card – Yellow Zone
- Green card – Green Zone
- Blue card – Blue zone
- Gray card – generic sensory card
**Yoga cards**

Check in this pocket for the yoga cards.

You can pick a card based on difficulty **OR** you can pick a card based on intended purpose **OR** you can pick a card at random.

1 is the easiest – 22 is the most difficult

- Blue cards – calming
- Yellow poses – altering.
- Green cards – focusing
Breathing exercise visual

breathe in

4

hold

7

breathe out

8
Grounding exercise visual

NAME THINGS YOU CAN...

5  See
4  Hear
3  Touch
2  Smell
1  Taste
Appendix E
Sensory Cards

**SENSORY CARD**
**SQUIGZ**

Grab the Squigz. Build a tower or creation with them for a few minutes.

**SENSORY CARD**
**ROCKER CHAIR**

Sit in the rocker chair for a few minutes. You can dim the lights to the room.

---

**SENSORY CARD**
**HOW TO USE:**

1. Determine which zone of regulation you are in.
2. Pick a sensory card from the designated zone you are in.

**OR**

1. Pick a gray sensory card to explore different sensory options.

**SENSORY CARD**
**RULES:**

1. Safe play only
2. Use your time AND the equipment wisely
3. Clean up after yourself
SENSORY CARD
ESSENTIAL OILS

Ask for the essential oils. Choose a scent you like and roll the oil on your wrist then rub your wrists together. Enjoy the smell.

SENSORY CARD
THERAPEUTIC BRUSHING

Grab a therapeutic sensory brush. Glide the brush down your arms and legs with moderate pressure. Repeat to both sides of the body.

SENSORY CARD
THERAPUTTY

Ask for the theraputty. Hide 10 beads in your theraputty. See how quickly you can find all 10 beads.

SENSORY CARD
THERAPUTTY

Ask for the theraputty. Pick a firm resistance. Stretch and pull the theraputty apart at least 20 times.
Dim the lights and turn on the lava lamp. Sit back and watch the lava for a few minutes.

Laying on a bean bag, wrap your arms all the way around the bean bag and give it a giant squeeze. Repeat this a few times.

Grab a grip strengthener and see how many times you can squeeze the device. Don’t forget the other hand.

Find some wrist weights and strap them on your wrists. Draw or write on a white board for a few minutes.
SENSORY CARD

KEYBOARD

Make a tune on the keyboard. See how long of a tune you can remember and repeat.

SENSORY CARD

BREATHING EXERCISES

Dim the lights to the room and find a comfortable spot to sit. Complete a few rounds of breathing exercises.

SENSORY CARD

ANIMAL WALKS

Pick your top 3 favorite animals. Walk how you think they would walk for about 1 minute each.

SENSORY CARD

DANCE PARTY

Have a fun dance party to an appropriate song! Just make sure to keep moving your body.
BLUE ZONE CARD

BOWLING

Grab a weighted ball and the bowling pins. Set up the bowling pins and roll the weighted ball towards them.

BLUE ZONE CARD

OBSTACLE

Set out sensory tiles, balance pods, and bubble discs to create a challenging balance obstacle course.

BLUE ZONE CARD

WATER

Grab a drink of water. If possible, make it cold water to wake your system up.

BLUE ZONE CARD

BOUNCE

Select a therapy ball and sit on it. While sitting on the ball, bounce up and down at least 10 times.
**BLUE ZONE CARD**

**JUMP ON TRAMPOLINE**

Set the trampoline up in the middle of the room. Jump up and down about 10 times then take a break. Repeat if needed.

**BLUE ZONE CARD**

**FAST-PACED GAME**

Play a fast-paced game such as Farkle or Do De Li Do. You can also play a quick card game like War.

**BLUE ZONE CARD**

**SWING**

Set up a swing of your choice. Spin on the swing no more than 5 times. Take a break then repeat if desired.

**BLUE ZONE CARD**

**PLAY MUSIC**

Play some upbeat music on the keyboard or your iPad. Keep the lights on if possible.
GREEN ZONE CARD
MINI BASKETBALL

Find inflated mini-basketballs in the sensory room. Shoot at the mini hoop on the back of the door for a few minutes.

GREEN ZONE CARD
VISUAL SENSORY TUBES

Watch some visual, liquid sensory bubble tubes from a comfortable position for a few minutes.

GREEN ZONE CARD
COLOR

Pick a coloring page from the coloring book. Color with colored pencils for a few minutes.

GREEN ZONE CARD
SPIN

Move all objects from the center of the room. Spin in a slow circle with your arms out. Spin the opposite direction and repeat a few times.
Find a stress ball in the sensory room. Squeeze the ball as hard as you can 10 times. Don’t forget to switch hands.

Grab a fidget and sit in a chair, on the floor, or on a therapy ball. Play with fidget for a few minutes.

Pick a puzzle to complete. Sitting on the floor or at a table, begin work on the puzzle.

Pick a game to play. Sitting on the floor or at a table, begin playing the game for a few minutes.
ANIMAL WALKS
Crawl on your hands and knees like a bear. Crouch down so your hands touch the floor and jump like a frog.

THERABAND PULLS
Grab some theraband and pull it apart as hard as you can. Repeat this at least 20 times.

PLAY MUSIC
Play some calming music either on the keyboard or on your iPad. You can dim the lights.

YOGA
Find the yoga cards in the sensory room. Pick 3-5 yoga poses to try.
Set up the hammock swing or the hug swing. Swing front to back or side to side for a few minutes.

Grab a weighted ball. Bounce the ball on the floor and catch it. Bounce and catch the ball at least 20 times.

Lay on your stomach on the scooter board and use your arms to propel the scooter board. Go up and down the room a few times.

Set up the liquid sensory tiles in any hopscotch pattern. Jump between each tile, with as much force as possible.
**RED ZONE CARD**

**BALL SLAMS**
Pick a weighted ball. Lift it up over your head and slam it down on the ground. Repeat 20 times.

**RED ZONE CARD**

**BEAN BAG PUNCHES**
Set a bean bag, or two, up against the wall. Punch the bean bag at least 30 times.

**RED ZONE CARD**

**WEIGHTED BLANKET + BEAN BAG**
Sit on the bean bag with a weighted blanket over your lap. You may dim the lights. Sit for a few minutes.

**RED ZONE CARD**

**WALL PUSH-UPS**
Place your hands on the wall, shoulder-width apart. Step your legs away from the wall and do at least 20 push-ups.
RED ZONE CARD
SWING

Put up the platform swing. Swing either front to back or side to side for a few minutes.

RED ZONE CARD
BEAN BAG JUMPS

Place the bean bag in the middle of the room. Jump and crash into the bean bag at least 10 times.

RED ZONE CARD
BALL ROLL OUT

Lay on your stomach over top of a therapy ball. Walk your hand outs so that the ball rolls down your legs. Walk your hands back in so that the ball rolls back toward your stomach.
Appendix F

Yoga Cards

Let’s do Yoga!

These are yoga cards designed to get our body moving and to help us reflect on how our body may be feeling.

Choose 5–10 poses from the deck of cards. Hold each pose for 30–45 seconds.

You may dim the lights and play soothing music to create a peaceful setting.

While holding each pose, you can do a quick body scan where you think about how different body parts may be feeling.

Increasing your body awareness is called interception and it can help us regulate our emotions.

Pay attention to the following body parts during yoga:

- Head
- Stomach
- Brain
- Eyes
- Heart

Downward Dog Pose

Start on all fours. Push through your arms and lift your hips upward toward the ceiling. Keep arms and legs straight, if possible.

How do your arms feel in this pose?

Butterfly Pose

Sitting tall, place the soles of your feet together. Place elbows against inner thighs and fold forward.

How do your legs feel in this pose?
Easy Pose

Sit up tall with your legs crossed.
Rest your hands on your knees or bring palms together at your chest.
Continue to sit tall.

How does your neck feel in this pose?

Breathing

While holding each of these poses, it is important to remember to breathe.

You can also work on some helpful breathing techniques to slow our mind and body down.

Try breathing slowly in through your nose and out through your mouth.

Remember to take slow and deep breaths during each pose.

Relaxation Pose

Lay on the floor with your legs extended out. You can rest your hands at your side or place one hand on your belly and the other over your heart.

How does your heart feel in this pose?

Crescent Lunge Pose

Start standing. Step into a lunge position with your right leg, keeping your left leg straight. Raise your arms overhead. Repeat with other leg.

How does your chest feel in this pose?
Cobra Pose
Lay on your stomach. Place your hands under your shoulders and lift your chest. You can straighten your arms or leave them bent.

How does your back feel in this pose?

Tree Pose
Standing up, bring right foot onto your left thigh or shin. Stretch your arms overhead if possible. Repeat pose standing on the other leg.

How do your feet feel in this pose?

Bridge Pose
Lying on your back with your knees bent, place your feet hips distance apart. Keep your arms at your side and push through your feet to lift your hips.

How does your head feel in this pose?

Chair Pose
In standing, raise your hands over head with palms facing together. Slowly bend your knees like you are sitting in a chair.

How does your stomach feel in this pose?
Cat Pose
Start on all fours. Push through your hands and round your spine toward the ceiling. Tuck your head and chin into your chest.

Cat Pose
How do your hands feel in this pose?

Cat Pose
How does your head feel in this pose?

How do your knees feel in this pose?

How does your head feel in this pose?

Cow Pose
Start on all fours. Press through your hands and arch your back, pushing your belly toward the ground. Lift your chin and neck toward the ceiling.

Cow Pose
How do your hands feel in this pose?

Cow Pose
How does your head feel in this pose?

How do your knees feel in this pose?

How does your head feel in this pose?

Boat Pose
Sit on the floor with legs straight out. Lean back and lift your legs. You can place your hands behind your thighs or bend your knees.

Boat Pose
How do your hands feel in this pose?

Boat Pose
How does your head feel in this pose?

How do your knees feel in this pose?

Rag Doll Pose
Start standing, with your feet hip-width apart. Gently fold over at the hips, keeping a small bend in the knees. Hold your opposite elbows and let your arms relax.

Rag Doll Pose
How do your hands feel in this pose?

Rag Doll Pose
How does your head feel in this pose?

How do your knees feel in this pose?
**Child’s Pose**
Start on all fours. Lean back so that your hips are resting on your feet. Walk your arms forward and let your muscles relax.

How does your heart feel in this pose?

**Mountain Pose**
Stand with your arms at your side. Push through your feet to stand tall, lifting your chest toward the ceiling.

How does your brain feel in this pose?

**Plank Pose**
Start on all fours. Step your feet out so that you are holding yourself in a plank position. You can hold this position on your toes or your knees.

How does your shoulders feel in this pose?

**Spinal Twist Pose**
Lying on your back, bring your right knee into your chest. Cross your right knee over toward the left side. Open both arms out to the side and look opposite of your knee. Repeat with other leg.

How do your lungs feel in this pose?
How does your ears feel in this pose?

Triangle Pose

In standing position, step your legs apart. Bring your arms out to your side, and slowly bend over toward your right leg. Repeat to the other side.

How does your head feel in this pose?

Hero Pose

Starting in all fours position, slowly shift your hips back so that you are sitting on your feet. Sit up tall.

How does your nose feel in this pose?

Warrior 2 Pose

Start standing. Step sideways into a lunge position with your right leg, keeping your left leg straight. Extend your arms out to the sides at shoulder height. Repeat with other leg.

How do your legs feel in this pose?

Seated Forward Bend Pose

Sit with your legs out in front of you. Fold forward, bringing your chest toward your thighs, and reach your hands towards your shins or toes.
About the cards

These yoga cards are colored coded according to their different purposes.

- Calming poses – Blue
- Alerting poses – Yellow
- Focusing poses – Green

These yoga cards are also numbered according to their difficulty, 1-22. The lower the number, the easier the pose is.

Tiger Pose

Start on all fours. Slowly raise your right arm out in front of you. Next, extended your left leg out. Hold this position and repeat on the other side.

How does your stomach feel in this pose?
Appendix G

Breathing Exercise Visuals

1. Breathe in
2. Hold
3. Breathe out
breathe out  breathe in
Breath IN for 4 counts

Hold for 4 counts

Hold for 4 counts

Breathe OUT for 4 counts
Appendix H

Grounding Exercise Visuals

NAME THINGS YOU CAN...

5  See
4  Hear
3  Touch
2  Smell
1  Taste
Grounding Exercise

Name 5 things you can see. Name 4 things you can touch. Name 3 things you can hear. Name 2 things you can smell. Name one thing you can taste.

These cards are designed to be used when you are stressed or anxious. The activities on these cards are intended to be calming in nature.

Pick a few cards to try each time you feel stressed or anxious.

Inspired by Every Movement Counts Calm Movement Cards (2023)
**CALMING CARD**

**Breathing Exercise**

Take a slow, deep breathe in, through your nose, like you are smelling a flower. Now, breathe out slowly, through your mouth, like you are blowing out candles. Repeat 5 times.

**Bear Hug**

Wrap your arms around yourself and give yourself a tight “bear” hug. Squeeze your arms around yourself as tight as you can and count to 10. Repeat 5 times.

**Color**

Find a coloring page you want to color. Take a close look at the page. Now, close your eyes and imagine the colors you want to use. Find those colors in the colored pencils and be creative.

**Yoga**

Pick 3-5 yoga poses from the deck of yoga cards in the room. Clear a spot in the room with enough room for each of the poses. Hold each pose for 30 seconds. Repeat again if needed.

*Inspired by Every Movement Counts Calm Movement Cards (2023)*
Find the positive affirmations list in the room. Pick 3 affirmations to say out loud. Repeat each one out loud a few times.

Lay flat on your back. Starting with your head, clench your muscles and intentionally relax them. Repeat with each area of the body from head to toe.

Sitting in a comfortable position, place your hand over your heart. Close your eyes and count your heartbeat for a few minutes.

Write down something that is causing stress or worry at the moment. Now, crumple your paper and toss your anxiety away. Toss your anxiety across the room or in the trash.

Inspired by Every Movement Counts Calm Movement Cards (2023)
Close your eyes and rest your palms facing up. Slowly tap each finger to your thumb while counting. Begin with your index finger on your left hand. Repeat on your right hand. Then start over with your small finger.

Ask for some lotion or hand cream from a teacher or staff member. With a firm pressure, begin to rub it in to your hands. Think about what you need to focus on during the next few minutes.

Think about a place or a moment that makes you happy. Close your eyes and imagine what that place or moment smells like, what you can see, and what you can hear.

Find some calming music on your iPad. You can listen to instrumental music or nature sounds like rain falling or birds chirping. Find a comfy spot to sit and relax while listening to music.

Inspired by Every Movement Counts Calm Movement Cards (2023)
CALMING CARD
Wash Away Worry

Go to the bathroom. At the sink, put some soap in your hands. Tighten your shoulders as you breathe in and lather your hands. Breathe out and release the tension in your shoulders. Repeat 3 times then rinse your hands.

CALMING CARD
Puzzle

Pick a puzzle. Find a comfortable place to sit and complete the puzzle. Let your worries go and focus on completing the puzzle.

CALMING CARD
Rock and Roll

Clear some space on the floor. Lie on your back on the floor. Bring your knees to your chest and hug them. Slowly rock back and forth on the ground over your spine.

CALMING CARD
Neck Circles

Make circles with your neck. When circling up, breathe in good intentions. When circling down, breathe out stress and worry. Repeat 3 times then switch directions.

Inspired by Every Movement Counts Calm Movement Cards (2023)
**CALMING CARD**

**Palm Presses**

Place the palms of your hands together at chest level. Press your hands together for 5 seconds. Release the pressure and repeat 5 times.

**CALMING CARD**

**Head Presses**

Interlock your fingers together and place your hands on top of your head. Push down through your hands while you push up through your head. Release and repeat 5 times.

**CALMING CARD**

**Fidgets**

Pick a fidget to play with. Find a comfortable place to sit. Play with the fidget while breathing out your stresses and worries.

**CALMING CARD**

**Humming**

Hum the melody of your favorite song. You can hum as loudly or as softly as you would like.

Inspired by Every Movement Counts *Calm Movement Cards* (2023)
Grab a piece of paper and a pencil. Write about what is causing stress or worry in your life. Or write about something positive in your life that you are thankful for.

Sit at the keyboard and play a simple melody. You can create your own tune or play the tune from a calming song.

Sitting in a comfortable position, close your eyes and count backwards from 100.

Fill some water up in a cup. Take small and slow sips of water to refresh your mind and your body.

Inspired by Every Movement Counts Calm Movement Cards (2023)
Appendix J

Sensory Processing Scale – Parent Form

SENSORY PROCESSING SCALE

Parent Form

Parents, this is a 40-question form created to better understand how your child is processing daily sensory information. The questions in this form were inspired from the book, Sensational Kids, by Lucy Jane Miller. This form, once scored, will provide staff at Grand Rapids Christian Middle School with a better picture on how to best help your child with their sensory needs throughout the day to further support their ability to learn successfully in school. Please follow the directions below.

Directions: Please answer the following questions by selecting the choice that best matches your child. This is just an estimate so do your best to choose what option you think fits your child the best.

Always (4): 100% of the time
Often (3): About 75% of the time
Occasionally (2): About 50% of the time
Rarely (1): about 25% of the time
Never (0): 0% of the time

1 My child is upset by unexpected sounds, such as sirens, an engine backfiring, or a public toilet flushing.

Always (4) Often (3) Occasionally (2) Rarely (1) Never (0)

2 My child responds negatively to noises by covering ears, running away, or crying.

Always (4) Often (3) Occasionally (2) Rarely (1) Never (0)

3 My child seems bothered by ordinary household items that make noise (e.g., vacuum, hair dryer, blender).

Always (4) Often (3) Occasionally (2) Rarely (1) Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Parent Form

4 My child avoids messy or sticky activities (e.g., mud, glue, finger paint on hands).

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

5 My child expresses distress with grooming activities (e.g., having fingernails cut, haircut, toothbrushing).

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

6 My child is bothered by different textures such as tags in the back of shirts or seams on socks.

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

7 My child is sensitive to different fabrics (insists on wearing certain clothing items or certain bed sheets).

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

8 My child refuses to walk barefoot on sand or grass or other textured surfaces.

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

9 My child reacts emotionally or aggressively to touch.

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

10 My child avoids or appears fearful of movement activities like swinging, sliding, going up stairs, or doing a somersault.

   Always (4)    Often (3)    Occasionally (2)    Rarely (1)    Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Parent Form

11. My child is bothered by bright lights even after others have adapted.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

12. My child is bothered by certain types of lighting (e.g., midday sun, fluorescent lights, strobe, or flickering lights).
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

13. My child appears overwhelmed by clutter or lots of items in the visual environment (things hanging from the ceiling and walls).
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

14. My child limits self to particular food types, textures, temperatures or flavors.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

15. My child is distressed by smells in the environment.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

16. My child gags easily with food or utensils in mouth.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

17. My child is excessively cautious and afraid to try new things.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

18. My child is upset by transitions or unexpected changes.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Parent Form

19. My child doesn’t notice noises in the environment.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

20. My child doesn’t respond when name is called.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

21. My child doesn’t notice that hands or face are dirty.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

22. My child doesn’t notice pain (e.g., will keep playing after getting hurt).
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

23. My child is unaware of the need to go to the bathroom.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

24. My child doesn’t catch social cues.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

25. My child accidentally bumps into things.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

26. It is hard to get my child up and going.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

27. My child seems to prefer sedentary activities.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Parent Form

28. My child is often unaware of things going on around them.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

29. My child doesn’t notice smells in the environment.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

30. My child loves to make noise just to make noise.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

31. My child prefers loud music, TV shows or people.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

32. My child touches everything.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

33. My child struggles to keep hands to self.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

34. My child purposely crashes or bumps into people or things.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

35. My child is always moving.
   Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
36 My child takes risks during play (e.g., climbs too high, jumps off things).

Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

37 My child likes to watch moving items (e.g., things that spin, flicker).

Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

38 My child stares at objects or lights.

Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

39 My child mouthes non-food items (e.g., chews, licks things).

Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

40 My child purposefully smells/sniffs items.

Always (4)  Often (3)  Occasionally (2)  Rarely (1)  Never (0)

Questions inspired by Sensational Kids by Lucy Miller (2014)
Appendix K

Sensory Processing Scale – Scoring and Interpretation

SENSORY PROCESSING SCALE

Scoring Instructions

Scoring this sensory processing scale will provide more information on a student’s sensory processing differences with emphasis on the following senses: auditory, tactile, vestibular, visual, and olfactory. With this information, you will better be able to attend to the student’s sensory processing needs throughout the school day and in the sensory rooms to further support their learning.

Contents

Page 1 – Directions for scoring and interpreting sensory processing scale
Page 2 – Table for transferring and calculating sensory processing scale scores
Page 3 – Student score sheet for records
Page 4 – Breakdown of questions per sensory processing type and sensory category

Directions for Scoring: Transfer the parent-selected scores from the completed sensory processing scale questionnaire to the table on page 2. Place the numerical score next to the appropriate question number. Add the total for each sensory category (auditory, tactile, vestibular, visual, oral/olfactory, and multisensory/behavioral) for each sensory processing type. Once you have the total for each sensory category and type, divide the total by the number of questions in the category and record response in gray box. This gives you the average score for sensory category and sensory processing type to determine frequency of sensory processing dysfunction per category and type. Then, transfer scores from the gray box to the student score sheet on page 3 for a clear picture of sensory processing break down.

Always (4): 100% of the time
Often (3): About 75% of the time
Occasionally (2): About 50% of the time
Rarely (1): about 25 % of the time
Never (0): 0% of the time

Interpreting Scores: Now that you have completed scoring the sensory processing scale it is time to interpret the scores. The higher the score, the higher the sensory processing dysfunction. The lower the score, the less sensory processing dysfunction noted. Total scores with a higher number to indicate more severe sensory processing dysfunction in a specific category and type. This sensory processing scale is not intended to diagnose sensory processing disorder but rather to serve as an indicator of if and/or what specific areas a student might be struggling with related to sensory processing.

Questions inspired by Sensational Kids by Lucy Miller (2014)
### Sensory Processing Scale

**Scoring Instructions**

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<td>Question 29</td>
<td>Question 39</td>
</tr>
<tr>
<td>Question 19</td>
<td>Question 30</td>
<td>Question 40</td>
</tr>
<tr>
<td>Question 20</td>
<td>Total:</td>
<td>Total:</td>
</tr>
<tr>
<td></td>
<td>Total / 3: Avg:</td>
<td>Total / 1: Avg:</td>
</tr>
<tr>
<td><strong>MULTISENSORY/BEHAVIOR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total / 2:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SOR Total:** **SUR Total:** **SS/SC Total:**

**Total / 18:** **Total / 11:** **Total / 11:**

Questions inspired by *Sensational Kids* by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Scoring Instructions

Student Sensory Processing Score Sheet

Student Name: ___________________________ Date: __________________

Homeroom Teacher: ___________________________ Grade: __________________

Sensory Over-Responsivity Average Score: _________

- Auditory Average Score: __________
- Tactile Average Score: __________
- Vestibular Average Score: __________
- Visual Average Score: __________
- Oral/Olfactory Average Score: __________
- Multisensory/Behavioral Average Score: __________

Sensory Under-Responsivity Average Score: _________

- Auditory Average Score: __________
- Tactile Average Score: __________
- Vestibular Average Score: __________
- Visual Average Score: __________
- Oral/Olfactory Average Score: __________

Sensory Seeking/Sensory Craving Average Score: _________

- Auditory Average Score: __________
- Tactile Average Score: __________
- Vestibular Average Score: __________
- Visual Average Score: __________
- Oral/Olfactory Average Score: __________

SCORE INTERPRETATION:

4 – student always with sensory dysfunction in this category
3 – student often with sensory dysfunction in this category
2 – student occasionally with sensory dysfunction in this category
1 – student rarely with sensory dysfunction in this category
0 – student never with sensory dysfunction in this category

Questions inspired by Sensational Kids by Lucy Miller (2014)
SENSORY PROCESSING SCALE

Scoring Instructions

**Sensory Over-Responsivity**
- Questions 1 – 18
  - **Auditory Input**
    - Questions 1 – 3
  - **Tactile Input**
    - Questions 4 – 9
  - **Vestibular Input**
    - Questions 10
  - **Visual Input**
    - Questions 11 – 13
  - **Oral and Olfactory Input**
    - Questions 14 – 16
  - **Multisensory/Behavioral**
    - Questions 17 – 18

**Sensory Under-Responsivity**
- Question 19 – 29
  - **Auditory Input**
    - Questions 19 – 20
  - **Tactile Input**
    - Questions 21 – 24
  - **Vestibular Input**
    - Questions 25 – 27
  - **Visual Input**
    - Question 28
  - **Oral and Olfactory Input**
    - Question 29

**Sensory Seeking/Craving**
- Question 30 – 40
  - **Auditory Input**
    - Questions 30 – 31
  - **Tactile Input**
    - Questions 32 – 34
  - **Vestibular Input**
    - Questions 35 – 36
  - **Visual Input**
    - Questions 37 – 38
  - **Oral and Olfactory Input**
    - Questions 39 – 40

Questions inspired by *Sensational Kids* by Lucy Miller (2014)