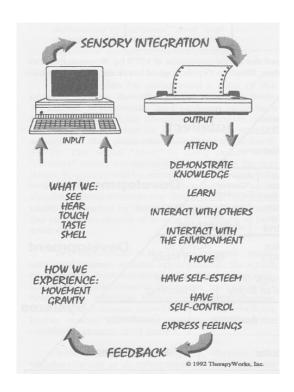
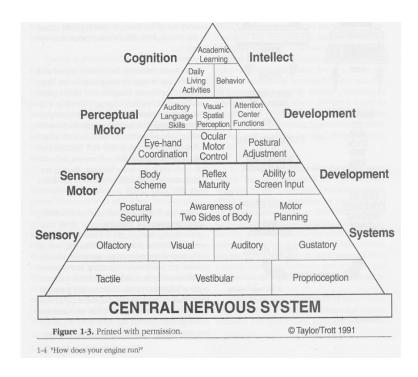
## The Sensory Toolbox

#### Objectives:

- EMPOWER you as educators to use The Sensory Toolbox for the Classroom to enhance learning for ALL of your students. Teachers are BRAIN CHANGERS!
- FACILITATE A TEAM APPROACH: Team members should be used as resources on ideas for sensory strategies and implementation (Special Ed teachers, facilitators, campus OTs)
- REDUCE the quantity of student specific referrals to related services (OT) by giving YOU the tools to address many behaviors

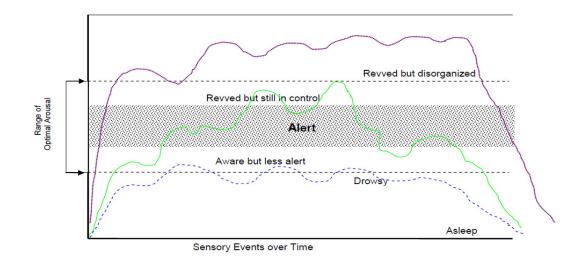
<u>Sensory Processing</u> is the ability to use information from the senses to produce a meaningful response. Our senses enable us to touch, taste, smell, see, hear, and experience movement and gravity. Helpful Illustrations from "How Does Your Engine Run":





#### Why is sensory processing important in my classroom?

It is the basis for sensory motor development, perceptual motor development, cognition and intellect. It is the basis of behavior, including optimal attention (on-task behavior). The goal is to help students make their engines run "just right" so they can *LEARN*! Illustration from Wilbarger (1991).



#### **Sensory Diet**

A sensory diet is the strategic use of sensory activities. While most of us use sensory strategies without really thinking about it (drinking coffee to stay alert, listening to soothing music to unwind, jogging to release tension, etc.), some children and adults have sensory needs that require a more intentional approach. A sensory diet is a plan to meet the sensory needs of students with sensory processing deficits so they will be better organized and regulated, which will improve their capacity for learning.

- Goal: To have the student better organize their systems for work behavior and achieve optimal attention levels for learning. This will also help them engage in social interactions and develop more complex motor skills.
- Remember: Each sensory personality is specific to that individual (like a fingerprint). There is NO cookie cutter answer. What works one day may not work another. It's not a sprint but a marathon.
  - Continuum: an individual can fluctuate within a continuum throughout a period of years, days, hours, or even minutes. [LOW threshold < -----> HIGH threshold ]
  - *Fluctuations:* can be caused by changes in routines, context, stress level, changes in sleep patterns or lack of sleep, medications, illness, biological needs, etc.
  - *Patience*: Try one strategy at a time, so you know what is working for that student. You will likely have to try implementing this strategy or tool several times before determining efficacy.
  - Consistency: You need to try out strategies consistently for 2-3 weeks. Take data if needed to help determine if the strategy is reducing off-task behaviors. If the intervention is working the student's engine will be running "just right:.
- \*\*PRECAUTIONS\*\*: These are general recommendations and do not include all therapeutic interventions available to address all areas of sensory processing. As with any activity recommendations, if your student has known seizures or other specific medical issues, please use appropriate precautions and supervision. Ask your campus OT if you are unsure.
- BE OBSERVANT: Watch behaviors and write them down. Then consider what is happening in the environment when these behaviors occur. When appropriate, ask the student what is going on.
- Think OUTSIDE THE BOX, BE CREATIVE! You do not need expensive or fancy equipment. Many strategies are just about changing the environment or learning materials slightly. Some sensory tools or equipment can be homemade or even made as a class project (glitter bottles, stress balls, etc.).
- *PRIMARY* Systems The senses never work in isolation; they are intertwined. However, you will get the biggest "bang for the buck" by addressing the tactile, vestibular and proprioceptive systems.
- TIMING: Once you determine what is causing the sensory behavior and are ready to try an intervention, think about when you should implement this strategy. (not mutually exclusive)
  - Should it be *before* an activity that is difficult to help them organize?
  - Should it be *during* an activity to help them maintain attention to task?
  - Should it be *after* non-preferred activities as a reward?
- BOUNDARIES: Important to provide guidelines and parameters to student regarding the intervention.
- RESOURCES: Use your co-workers as resources! We all benefit from each other's experiences.

# Reacts Reacts **PASSIVELY ACTIVELY** (to counteract) LOW REGISTRATION **SEEKING** HIGH Threshold Underaroused **SENSITIVE AVOIDING LOW** Threshold Overwhelmed Bryantoti \* www.OlparOtcom/221271

| (Dunn, 1997) |
|--------------|
|              |
| ¥.           |
| HIGH         |
| Threshold    |

## Reacts PASSIVELY

# Reacts ACTIVELY (to counteract)





**SEEKING** 



OBSERVATION: uninterested, self absorbed, flat affect, don't notice what is going on around them, miss cues that might guide their behaviors WHY? most events in daily life do not contain a sufficient amount of intensity to meet these children's thresholds making them somewhat oblivious

<u>INTERVENTION</u>: increase the intensity of sensory input to improve the chances for noticing and responding to environmental demands

<u>OBSERVATION</u>: enjoy and generate extra sensory input, very active, continuously engaging and excitable

WHY? engaging in active strategies to increase input as a means to meet high thresholds INTERVENTION: provide more opportunities for the desired sensory input within daily activities so they do not disengage in order to get what they need to stay alert and engaged



### SENSITIVE









LOW Threshold OBSERVATION: detect more input than others, hyperactive, distractible, complainers, notice many more sensory events than others do and frequently comment about them WHY? they have low thresholds that enable them to have a high rate of noticing what is going on around them, they allow things to happen and comment rather than remove themselves INTERVENTION: provide more structured input, so that the person does not become overwhelmed in everyday life

OBSERVATION: bothered by input more than others, rule bound, ritual driven, uncooperative, engage in behaviors to limit input WHY? limiting sensory opportunities because unfamiliar sensory input is difficult to understand and organize & may cause fight or flight. Rituals provide a high rate of familiar sensory input, while simultaneously limiting the possibility of unfamiliar input

<u>INTERVENTION</u>: make input less available, so that student does not become overwhelmed and want to withdraw from participation in everyday life

# **HEARING (AUDITORY)**

| LOW THRESHOLD - NEEDS LESS   | HIGH THRESHOLD - NEEDS MORE   |  |  |
|--|---|--|--|
| If you see these Behaviors:         □ distracted by sounds not normally noticed by others; i.e., humming of lights or refrigerators, fans, heaters, or clocks ticking         □ fearful of the sound of a flushing toilet (especially in public bathrooms), vacuum, hairdryer, squeaky shoes, or a dog barking         □ started with or distracted by loud or unexpected sounds         □ bothered/distracted by background environmental sounds; i.e., lawn mowing or outside construction         □ frequently asks people to be quiet; i.e., stop making noise, talking, or singing         □ runs away, cries, and/or covers ears with loud or unexpected sounds         □ may refuse to go to movie theaters, parades, skating rinks, musical concerts etc.         □ may decide whether they like certain people by the sound of their voice  | If you see these Behaviors:  ☐ often does not respond to verbal cues or to name being called ☐ appears to "make noise for noise's sake" ☐ loves excessively loud music or TV ☐ seems to have difficulty understanding or remembering what was said ☐ appears oblivious to certain sounds ☐ appears confused about where a sound is coming from ☐ talks self through a task, often out loud ☐ needs directions repeated often, or will say, "What?" frequently   |  |  |
| <ul> <li>Try These Interventions:</li> <li>Keep distractions to a minimum: close door to hallway, cover windows, cover very loud speaker with material to filter down the loud factor</li> <li>Use rugs, carpets and even fabric on the walls and floors to help decrease the echo effect and block extraneous noises</li> <li>Allow child to have preferential seating in a classroom or large group setting</li> <li>Prepare a child in advance for overhead speaker announcements in the school</li> <li>Use little to no verbal information, when possible substitute gestures</li> <li>If using verbal directions, use short, simple one step instructions</li> <li>Use picture cues for directions (best when paired with short verbal)</li> <li>Use ear muffs or the old large ear phones without noise/music just to filter some of the noise</li> <li>Allow use of headphones (if tolerated) to block extraneous noises. May choose to play white noise, calming music, Mozart or Chants with headphones.</li> <li>Allow oral activities (e.g. chewing gum, sucking on water bottles, sour candies, gummy worms, fruit roll ups, crunchy snacks, etc.) which help to increase concentration on auditory input.</li> </ul> | <ul> <li>Try These Interventions:</li> <li>Headphones with music</li> <li>Shoe squeakers; noisemakers (horns, whistles, etc.);</li> <li>Loud or noisy environments (e.g. movie theatres; concerts; etc.)</li> <li>Outdoor environments with natural noises</li> <li>Music during study time</li> <li>Noisy toys</li> <li>Pair verbal directions with gestures or visual cues for clarity</li> <li>Get their attention before giving directives</li> <li>Let them repeat directions to show they heard them/understood them</li> </ul> |  |  |

# SIGHT (VISUAL)

| LOW THRESHOLD - NEEDS LESS  | HIGH THRESHOLD - NEEDS MORE  |  |
|---|--|--|
| If you see these Behaviors:  □ sensitive to bright lights; will squint, cover eyes, cry and/or get headaches from the light  □ has difficulty keeping eyes focused on task he/she is working on for an appropriate amount of time  □ easily distracted by other visual stimuli in the room; i.e. movement, decorations, windows, doorways, etc.  □ has difficulty in bright colorful rooms or a dimly lit room  □ rubs his/her eyes, has watery eyes or gets headaches after reading or watching TV  □ avoids eye contact  □ enjoys playing in the dark   | If you see these Behaviors:  □ has difficulty telling the difference between similar printed letters or figures; i.e., p & q, b & d, + and x, or square and rectangle  □ has a hard time seeing the "big picture"; i.e., focuses on the details or patterns within the picture  □ has difficulty locating items among other items; i.e., papers on a desk, clothes in a drawer, items on a grocery shelf, or toys in a bin/toy box  □ often loses place when copying from a book or the chalkboard  □ difficulty controlling eye movement to track and follow moving objects  □ has difficulty telling difference between different colors, shapes, and sizes  □ often loses his/her place while reading or doing math problems  □ makes reversals in words or letters when copying, or reads words backwards; i.e., "was" for "saw" and "no" for "on" after first grade  □ complains about "seeing double"  □ difficulty finding differences in pictures, words, symbols, or objects  □ difficulty with consistent spacing and size of letters during writing and/or lining up numbers in math problems  □ difficulty with jigsaw puzzles, copying shapes, or cutting/tracing along a line tends to write at a slant (up or down hill) on a page  □ confuses left and right  □ difficulty judging spatial relationships in the environment; i.e., bumps into objects/people or missteps on curbs and stairs |  |
| <ul> <li>Try These Interventions:</li> <li>Natural lighting (from windows) when possible vs. fluorescent</li> <li>Decrease visual distractions</li> <li>Frequent breaks during visual motor activities</li> <li>Visually modified work area (may need to cover up part of work to decrease stimulus)</li> <li>Hide clutter in bins or behind curtains (a simple, solid-color curtain hung over a bookshelf instantly reduces visual clutter).</li> <li>Use solid colored rugs instead of patterned ones and solid-colored walls (for example, avoid patterned wallpaper).</li> <li>Try to avoid use of objects (toys, instructional materials, clothes, towels, etc.) in colors that your child responds negatively to.</li> <li>To help with concentration, have a child sit where there is less visual distraction (e.g. away from the window to avoid the distraction of the outdoors).</li> <li>Try colored light bulbs and/or adjustable light dimmers.</li> </ul> | <ul> <li>Try These Interventions:</li> <li>Provide educational materials that have visual components (colorful, spinning, light up, flashing, shining, mirrors, puzzles, etc.)</li> <li>Choose bright colors and patterns to provide more visual stimulation in their environment (towels, sheets, pictures,</li> <li>Rope lighting can be used in multiple strings and various colors</li> <li>Use visual contrast whenever possible</li> <li>Visual cues on paper can be helpful (green line on left/red on right; bold lines; colored spaces; etc.)</li> </ul>  |  |

# **TOUCH (TACTILE)**

| LOW THRESHOLD - NEEDS LESS |  | HIGH THRESHOLD - NEEDS MORE |  |
|----------------------------|--|-----------------------------|--|
|                            | becomes fearful, anxious or aggressive with light or unexpected touch does not like to be held or cuddled avoids standing in close proximity to other people or peers (especially in line) becomes frightened when touched from behind or by someone/something they cannot see complains about having hair brushed or groomed avoids group situations for fear of the unexpected touch resists friendly or affectionate touch from anyone besides parents or siblings dislikes kisses, will "wipe off" place where kissed prefers deep hugs may overreact to minor cuts, scrapes, and or bug bites avoids touching certain textures of material (blankets, rugs, stuffed animals) refuses to wear new or clothes with rough textures, tags bother them, etc. avoids/dislikes/aversive to "messy play", i.e., sand, mud, water, glue, glitter, playdoh, slime, shaving cream/funny foam etc. will be distressed by dirty hands and want to wipe or wash them frequently distressed about having face washed | If y                        | may crave touch, needs to touch everything and everyone is not aware of being touched/ bumped unless done with extreme force or intensity is not bothered by injuries like cuts and bruises, and shows no distress with shots may not be aware that hands or face are dirty or feel his/her nose running may be self-abusive; pinching, biting, or banging his own head mouths objects excessively frequently hurts other children or pets while playing (unintentional) repeatedly touches surfaces or objects that are soothing (i.e., blanket) seeks out surfaces and textures that provide strong tactile feedback thoroughly enjoys and seeks out messy play craves vibrating or strong sensory input Unaware of personal space boundaries  |
| Try                        | Steamroller (if available) or steam roller with yoga ball Always approach child from front to give visual cues of what is coming and helpful to give child verbal cues at the same time.  Deep pressure into the palms, weight bearing on the hands Body Sox, Bear Hug Vest (request information from therapist) Compression garments made from a Lycra-like blend material such as: Spio, Underarmour, Theratogs, Benik, Snug, Body Splint, Skins, etc. Weighted items: vest, lap pad, shoulder snake, baseball cap, blanket Sensory Comfort: Company that makes seamless clothing and undergarments Wilbarger Deep Pressure Proprioceptive Technique (DPPT): ask trained therapist for instruction and training NEVER FORCE ACTIVITIES, respect the need to withdraw, do not elicit fight or flight response   | Try                         | Provide safe input that meets "need" sensations such as: back scratching, tickling, light touch vs. deep pressure, light brushing, etc.  Allow child to manipulate textures (fuzzy, hairy, sticky, rough, etc.) that provide increased tactile input  Shaving cream activities or free play with textures mixed in for hand play Draw shape or letters on skin and have child guess it (try back, hands)  Paint body parts game using a variety of brushes (no paint)  Texture bags or locate objects hidden in textures  Draw on carpet or chalkboard with chalk and erase with hands  Roll around on grass or on carpeted surface  Popping bubbles with different body parts, i.e. elbow, knee, foot, head Help to decorate cookies, or make art projects with different media  Free play with: sand/rice box, Gak, flarp, mud pies, etc.  Finger painting |

# TASTE (GUSTATORY)

| LOW THRESHOLD - NEEDS LESS   | HIGH THRESHOLD - NEEDS MORE   |  |
|--|---|--|
| If you see these Behaviors:  □ picky eater, often with extreme food preferences; i.e., limited repertoire of foods, picky about brands, resistive to trying new foods or restaurants, and may not eat at other people's houses)  □ may only eat "soft" or pureed foods past 24 months of age □ may gag with textured foods □ has difficulty with sucking, chewing, and swallowing; may choke or have a fear of choking   | If you see these Behaviors:  ☐ may lick, taste, or chew on inedible objects ☐ prefers foods with intense flavor; i.e., excessively spicy, sweet, sour, or salty ☐ excessive drooling past the teething stage ☐ frequently chews on hair, shirt, or fingers ☐ constantly putting objects in mouth past the toddler years ☐ acts as if all foods taste the same ☐ can never get enough condiments or seasonings on his/her food ☐ loves vibrating toothbrushes and even trips to the dentist  |  |
| <ul> <li>Try These Interventions:</li> <li>Begin adding textures to a diet slowly as child tolerates it</li> <li>Be aware that child may be very sensitive; may need to try new sensory input very gradually and slowly</li> <li>May ask SLP/OT for information on:         <ul> <li>Normalizing oral motor skills</li> <li>Deep Pressure Proprioceptive Technique</li> <li>Facial deep pressure and stretches</li> <li>Vibration on face and lips to begin with, slowly advancing to inside the mouth and cheeks</li> </ul> </li> </ul> | <ul> <li>Try These Interventions:</li> <li>Vibration in and around mouth</li> <li>Crunchy and chewy foods help to alert and organize mouth</li> <li>Spicy, sour, salty and bitter foods help "wake up" or alert mouth</li> <li>Condiments (ketchup, mustard, picante sauce, hot relish, etc.) added to or topping typical foods (such as potatoes, vegetables, meat, etc.) help alert "wake up" or alert mouth</li> <li>Battery operated tooth brush</li> <li>Drinking from water bottles kept at desk (send them home weekly to be washed).</li> <li>Chewing on rubber tubing placed on the end of a pencil, straw or coffee stir stick</li> </ul> |  |

# SMELL (OLFACTORY)

| LOW THRESHOLD - NEEDS LESS  | HIGH THRESHOLD - NEEDS MORE   |
|---|---|
| If you see these Behaviors:  □ reacts negatively to, or dislikes smells which do not usually bother, or get noticed, by other people  □ tells other people (or talks about) how bad or funny they smell  □ refuses to eat certain foods because of their smell  □ offended and/or nauseated by bathroom odors or personal hygiene smells  □ bothered/irritated by smell of perfume or cologne  □ bothered by household or cooking smells  □ may refuse to play at someone's house because of the way it smells  □ decides whether he/she likes someone or some place by the way it smells | If you see these Behaviors:  ☐ has difficulty discriminating unpleasant odors  ☐ may drink or eat things that are poisonous because they do not notice the noxious smell  ☐ unable to identify smells from scratch 'n sniff stickers  ☐ does not notice odors that others usually complain about  ☐ fails to notice or ignores unpleasant odors  ☐ makes excessive use of smelling when introduced to objects, people, or places  ☐ uses smell to interact with objects   |
| <ul> <li>Doesn't tolerate the smell of cleaning products</li> <li>Try These Interventions:         <ul> <li>Use a calming scent: aftershave, almond extract, apple, banana, butter, chamomile, soap, cinnamon, hand lotion, crayons, lily of the valley, vanilla extract, lavender, scented markers, clary-sage, jasmine, ylang ylang</li> <li>Keep paint supplies, markers, class animal cages or other potentially irritating scents away from child's desk</li> <li>Be aware of intermittent smells that may be bothersome</li></ul></li></ul>   | <ul> <li>Try These Interventions:</li> <li>Use an alerting scent: basil, chocolate, coffee, garlic, lemon, orange, peppermint, mint, onion, pencil shavings, rubber, sardines, vinegar, dirt, chives, roses, senna, eucalyptus, patchouli, rosemary, pine, mandarin, geranium, fennel, clove</li> <li>Provide smell experiences as part of the sensory diet</li> <li>Enrich tasks with scented lotions, fragrances, essential oils on cotton ball, scratch and sniff stickers</li> <li>Encourage daily cleaning routine (pine-sol, etc.)</li> <li>Create a "smelling box" with small bottles of various scents</li> </ul> |

# MOVEMENT (VESTIBULAR)

| LOW THRESHOLD - NEEDS LESS  | HIGH THRESHOLD - NEEDS MORE   |  |
|---|---|--|
| If you see these Behaviors:  □ avoids/dislikes playground equipment; i.e., swings, ladders, slides, or merry-go-rounds  □ prefers sedentary tasks, moves slowly and cautiously, avoids taking risks, and may appear "wimpy" or "stiff"  □ may physically cling to an adult they trust  □ may appear terrified of falling even when there is no real risk of it  □ afraid of heights, even the height of a curb or step  □ fearful of going up or down stairs or walking on uneven surfaces  □ afraid of being tipped upside down, sideways or backwards; will strongly resist getting hair washed over the sink and/or diaper change  □ startles if someone else moves them; i.e., pushing his/her chair closer to the table  □ may be fearful of and have difficulty: riding a bike, jumping, hopping, or balancing on one foot (especially if eyes are closed)  □ loses balance easily and may appear clumsy  □ Turns whole body to look at you  □ fearful of activities which require good balance  □ avoids rapid or rotating movements   | If you see these Behaviors:  □ in constant motion, can't seem to sit still □ craves fast, spinning, and/or intense movement experiences □ could spin for hours and never appear to be dizzy □ loves the fast, intense, and/or scary rides at amusement parks □ always jumping on furniture, trampolines, spinning in a swivel chair, or gets into upside down position □ loves to swing as high as possible and for long periods of time □ is a "thrill-seeker"; dangerous at times □ always running, jumping, hopping etc. instead of walking □ rocks body, shakes leg, or head while sitting □ likes sudden or quick movements, such as, going over a big bump in the car or on a bike  |  |
| <ul> <li>Try These Interventions:</li> <li>Verbally prepare the child for the activity or movement; allow them to watch the activity first if possible</li> <li>Rocking slowly in a rocking chair</li> <li>Car rides with seat belt snug</li> <li>Swimming: allows body movements that child refuses to do anti-gravity and provides calming with the resistive nature of the water</li> <li>General activities to increase postural control, strength and dynamic balance (ask therapist)</li> <li>When a child is gravitationally insecure and scared of movement (especially head down or head back) begin slowly and rhythmically and at small intervals until the child builds tolerance. May even need to hold them securely on your lap when trying new movement activities such as a glider, swing or amusement park ride.</li> <li>Suspended Playground Equipment (where available) provides a powerful sensation for calming, and has the longest lasting effect (typically lasts 8 hours after 15 minutes on a swing hung from a single point in a linear direction).</li> </ul> | <ul> <li>Try These Interventions:</li> <li>Supervised gross movement activities such as: running in place; exercises; mini-trampoline jumping; bouncing on a bed; bouncing while sitting on a ball; spinning circles; animal walks; rocking; twisting, tumbling, rolling, walking, running, etc. scooter board activities, therapy ball (commercial "exercise ball") activities; "tug-of-war" games;</li> <li>Classroom movement: Air cushions on floor during circle time or in desk/seat during seat work (commercially available); sitting on a large ball chair (commercially available); sitting on a ball with stationary base/stand while working at table/desk; allowing standing at desk if needed; allowing sitting on feet in chair; rotational device; t-stool at desk; etc. These ideas can also be helpful for "homework time".</li> <li>Outdoor activities: swimming; various playground equipment; jumping on a trampoline; swinging; biking; riding in a car; jumping rope; hopscotch; soccer type ball games; amusement park rides (when available); etc.</li> <li>Suspended Playground Equipment (where available) provides a powerful sensation for arousing, and has the longest lasting effect (typically lasts 8 hours after 15 minutes on a swing hung from a single point in a linear direction).</li> </ul> |  |

## **PROPRIOCEPTION** (Input from muscles and joints)

## "The Equalizer"

- Generally any "heavy work" activity that involves the use of large muscle groups, weight bearing or hanging activity
- <u>Classroom Equipment</u>: Place chairs on desks at end of day or take down at beginning of day, erase the chalkboard/dry erase board, wash desks and/or chalkboard/dry erase board, help rearrange desks in the classroom, stack chairs.
- <u>Carry Heavy Items</u>: Fill small egg crates with books to take to other classrooms, carry appropriately heavy notebooks to the office or between classes, carry books with both hands hugging the book to the chest, move several packs at a time of Xerox paper from the storage area to the school copy center, help the gym teacher move mats, hang them up, etc.
- <u>Snack breaks</u>: crunchy food (dry cereal, vegetables, pretzels, popcorn), chewy food (twizzlers, fruit roll ups, starburst, tootsie rolls), allow gum chewing, sip on water bottle through a coffee stirrer or crazy straw
- Classroom Activities: Sharpen pencils with a manual sharpener, staple paper onto bulletin boards
- <u>Playground Equipment and Outside Activities</u>: Swing from the trapeze bar, sports activities that involve running and jumping, run around the track at school.
- <u>Classroom Exercises</u>: Push against a wall, chair push-ups, the push game, push hands together, isometric exercise breaks, Animal walks (crab, bear, frog, rabbit, salamander, etc.) and wheelbarrow walks. Have the child "animal walk" in the hallway prior to difficult tasks requiring sustained attention.
- Hallway Activities: Open doors for people, hold open doors, push the lunch cart or carry a lunch bin to the cafeteria
- Weight bearing: Have students color or write on large paper on the floor while on hands and knees, students can write in journal while lying on their stomachs, play pencil races where students get on hands and knees and roll pencil down the hall with one hand while creeping and weight bearing on the other hand, squeeze toys that can be squeezed quietly on the student's lap under the desk so that the student does not disturb the class, jump on mini tramp (where available)
- Tie theraband to front of chair base for feet to bounce on during class
- Extracurricular activities: swimming, diving after weighted sticks in the pool, sports activities involving running or jumping, gymnastics, horseback riding, wrestling, karate, tennis, golf, basketball, soccer, etc.
- <u>Home activities</u>: yard work (allow child to rake, pull out heavy trash can, push wheelbarrow, carry or pull heavy bags of grass/soil), use of noisemakers (whistles, horns, etc.), blowing bubbles, pillow fights, wipe off table or push in chairs after dinner
- Commercially Available toys and activities for parents to consider outside of the school setting: (note: adult supervision may be required with some activities) mini-tramp, pogo sticks, jumpers/bouncers, scooter boards, play tunnels, jungle gyms, indoor rock walls, theraband activities, theraputty or silly putty, bubble wrap, weighted balls thrown against trampoline, vibrating toys or toothbrushes, bean bag chairs, Weighted blankets, "The Steamroller" Machine, resistance tunnels, "Body Sox" (lycra stretch bags for the body), ball pits and pools, net climbers, push toys, weighted backpacks, "Co-oper Lycra Blanket", "Rapper Snappers", weighted lap or neck pads.

#### **REFERENCES**

Action Alphabet. Suzanne E. Wilkinson, BS.OT and Kathleen L. Herring, BA c1995

Action-Packed Classrooms. Movement Strategies to Invigorate K-5 Learners. Cathie Summerford, c2005

Answers to Questions Teachers Ask about Sensory Integration: Forms, Checklists, and Practical Tools for Teachers and Parents. Jane Koomar, Carol Kranowitz, Stacey Szklut and Lynn Balzer-Martin. c2001

Behavior Solutions for the Inclusive Classroom: A Handy Reference Guide that Explains Behaviors Associated with Autism, Asperger's, ADHD, Sensory Processing Disorder, and other Special Needs by Beth Aune, Beth Burt and Peter Gennaro (Apr 30, 2010)

Brain Breaks for the Classroom. Quick and Easy Breathing and Movement Activities That Help Students Reenergize, Refocus, and Boost Brain Power – Any Time of the Day! Michelle Gay, c2009

Brain Compatible Strategies. Hundreds of easy-to-use, brain-compatible activities that boost attention, motivation, learning and achievement. Eric Jensen c2004 Brain Gym. Paul E. Dennison, PhD. And Gail E. Dennison c1986

Brain Gym. Teacher's Edition Revised. Paul Dennison, PhD. And Gail E. Dennison c1989

Building Sensory Friendly Classrooms to Support Children with Challenging Behaviors: Implementing Data Driven Strategies! by Rebecca A. Moyes. c 2010 Building Bridges Through Sensory Integration: Therapy for Children with Autism and Other Pervasive Developmental Disorders. Paula Aquilla, Shirley Sutton, Ellen Yack. C2002

Drive Thru Menus. Exercise Posters for Relaxation and Stress. Leader's Manual. Tere Bowen-Irish, OTR/L c2006 and c2004

Edu-K for Kids. Paul E. Dennison and Gail Dennison. C1987

Fidget to Focus. Outwit Your Boredom. Sensory Strategies for Living with ADD. Roland Rotz, PhD and Sarah D. Wright, M.S. A.C.T. c2005

Hands On. How to Use Brain Gym in the Classroom. A Practical Photo Manual For Educators, Parents and Learners. Isabel Cohen and Marcelle Goldsmith. c2000

"How Does Your Engine Run?" - A Leader's Guide to The Alert Program" for Self-Regulation. Mary Sue Williams, OTR/L and Sherry Shellenberger, OTR/L

Last Child in the Woods. Saving Our Children from Nature-Deficit Disorder. Richard Louv. c2006

Learning To Slow Down and Pay Attention. A Book for Kids About ADD. Second Edition. Kathleen G. Nadeau, PhD. and Ellen B. Dixon, Ph.D. c1997

Learning with Body in Mind. The Scientific Basis for Energizers, Movement, Play, Games and Physical Education. Eric Jensen, c2000

Learning Through The Senses Resource Manual. The Impact of Sensory Processing in the Classroom c2006

Mrs. Gorski, I Think I Have "Wiggle Fidgets" by Barbara Esham c2008

SPARK. John J. Ratey, MD with Eric Hagerman. C2008

Raising A Sensory Smart Child. The Definitive Handbook for Helping Your Child with Sensory Integration Issues. Lindsey Biel, M.A., OTR/L and Nancy Peske. c2005

Super Teaching. Eric Jensen, c2009

Take Five. Staying Alert at Home and School. Mary Sue Williams and Sherry Shellenberger. C2001

Teachable Transitions. 190 Activities to Move from Morning Circle to the End of the Day. Rae Pica. C2003

Test Drive. Introducing the Alert Program through song. By Mary Sue Williams, OTR/L and Sherry Shellenberger, OTR/L c2006

The Out-of-Sync Child: Recognizing and Coping with Sensory Processing Disorder, Revised Edition. Carol Kranowitz, MA 2005

The Out-of-Sync Child Has Fun, Revised Edition: Activities for Kids with Sensory Processing Disorder. Carol Kranowitz, MA 2003 The Sensory Toolbox, compiled by Laura Dowdy, OTR/L February 2012

#### RESEARCH

Davies, P., Gavin, W.J. (2007). Validating the diagnosis of sensory processing disorders using EEG technology. *American Journal of Occupational Therapy,* 61(2), 176-189.

Mahar M., Murphy S., Rowe D, et al. (2006) Effects of a Classroom-Based Program on Physical Activity and On-Task Behavior. *Medicine and Science in Sports and Exercise*, 38(12), 2086-2094.

Schilling, D.L., Washington, K., Billingsley, F.F., & Deitz, J. (2003). Classroom seating for children with attention deficit hyperactivity disorder: Therapy balls versus chairs. *American Journal of Occupational Therapy*, 57, 534-541.

VandenBerg, N.L. (2001). The use of a weighted vest to increase on-task behavior in children with attention difficulties. *American Journal of Occupational Therapy*, 55, 621-628.

Craig A. Johnston, Chermaine Tyler, Sandra A. Stansberry, Jennette L. Palcic, John P. Foreyt: Gum chewing affects academic performance in adolescents. ASN Scientific Sessions and Annual Meeting at Experimental Biology 2009, New Orleans, LA, April 2009. LB 487.

#### **WEBSITES**

www.sensorysmarts.com Official web site for *Raising a Sensory Smart Child*.

www.spdnetwork.org Sensory Processing Disorder Foundation conducts research and provides education and advocacy.

www.ateachabout.com HenryOT's website – great products including the "Tools" handbooks (*Tools for Tots, Tools for Teachers,* & more!). www.sensory-processing-disorder.com This site has lots of great information for therapists, parents, and teachers. Also has an extensive list of

relevant research articles.

www.alertprogram.com TherapyWorks helps kids from preschool to age 12 with regulation problems through their "Alert" program based on the book

"How Does Your Engine Run?" This is a good resource to assist kids with self-regulation.

www.spdfoundation.net Another great site for information and research.

#### **EQUIPMENT SOURCES**

www.integrationscatalog.com Request catalog or shop online. Great selection of toys, equipment, and resources for addressing SPD and creating sensory diets.

www.pfot.com Pocket Full of Therapy. Unique therapeutic toys and equipment for sensory diets.

www.sensorycomfort.com Seamless socks and more!

www.flaghouse.com A little bit of everything therapeutic.

www.beyondplay.com Great selection of toys and equipment for use in sensory diets.

www.stepforward123.com Nice selection of reasonably priced therapy products and toys for kids with special needs.

www.sensoryprocessingbugs.com Cute, one-of-a-kind sensory products and lots of great information.