1. Sing and dance (preparing for sitting)  
   *For busy bees
2. My heels down flat  
   *For tippy toe tots
3. Get your wee in the water  
   *For potty pleasers

Downloadable Lyrics on CD

3 New Tools Coming Soon 😊

Tools for Infants (Book)
Sensory Strength & Play (DVD)
SPM for Infants & Toddlers (Assess)

Today
- Using the SPM and SPM-P
- SPM Quick Tips User Guide: clinical reasoning
- Electronic scoring and sorting
- SPM Quick Tips
- Case studies: Test-retest and using the QTs
  - Postural control (Vestibular bilateral integration)
  - Praxis (motor planning and ideation)
- The term “therapy practitioner,” used throughout, refers to OT, PT, or SLP

References are at the back of your handouts
The Sensory Processing Measures
See your additional handouts

SPM (5-12 yrs)  
SPM-Preschool (2-5 yrs)  

Additional School Environments:  
Music, Art, PE, Playground, Cafeteria and Bus

After completed, you add the raw scores on Main Classroom scoring worksheet for each scale & write total in boxes

Total Sensory Systems Scale Score: TOT
includes five listed systems, plus items (#41-45) for taste (gustatory) / smell (olfactory) processing:

- TOT is a summary score representing total dysfunction across all sensory systems.
- Useful if you need a single score that represents general dysfunction in sensory processing.
- Used to compare the child’s functioning in home and school environments.
Example: 3 interpretive shaded areas on both Home and Main Classroom Profile Sheets

Dark
Medium
Unshaded

Home
Main Classroom

At bottom of HOME Form Profile Sheet subtract Main Classroom TOT T-score from Home TOT T-score

In this profile, the score of -16 means that there is a definite difference: More problems in Main Classroom than in Home

Write raw school environments scores on bottom of Main Classroom Profile Sheet

If score is higher or equal to cutoff scores on SPM School environments = WORSE than 90 % of typical students

School environments

Art Class

Cutoff score = 29. Elements that may cause problems for children with sensory processing disorders include sitting on stools, smells and touch sensations from art materials (glue, paint, etc.), visual overload from artwork on walls, participating with others in creative projects, manipulating tools (scissors, paintbrushes, etc.), and drawing and other visual-spatial tasks.

Music Class

Cutoff score = 29. Elements that may cause problems for children with sensory processing disorders include paying attention to music instructor, listening to music, singing, playing musical instruments, and participating in movement activities (e.g., dancing).
Physical Education Form
This information is in the Manual

Physical Education Class

Cut-off score = 28. Elements that may cause problems for children with sensory processing disorders include large open spaces (indoors and outdoors), paying attention to physical education instructor, learning new athletic skills, need for physical endurance, playing games on a team, and wearing gym clothes.

Example of PE Item:
Has difficulty completing tasks from a presented model.

Praxis (Planning and Ideas)/Motor planning

Sensory integration vulnerabilities
Item level interpretation -
Examining individual items provides descriptive clinical information on processing vulnerabilities within each sensory system

Under-responsivity
Over-responsivity
Sensory seeking and also

Perception
Ocular control
Postural control

Seems to have constant desire to have strong sensory input.
It is important to look at why this may be occurring. Challenges with over and under responsivity, modulation, praxis and processing problems, as well as individual temperament can all contribute to this behavior.

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Henry Occupational Therapy
Several vestibular vulnerabilities are included in the SPMs

- Excessive seeking of intense vestibular input
- Vestibular over-responsivity / under-responsivity
- Problems with perception of body movements in space and/or poor postural control

<table>
<thead>
<tr>
<th>SPM Main Classroom</th>
<th>Balance and Motion (BAL)</th>
<th>Items</th>
<th>Seeking</th>
<th>Postural control</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Push hand along wall when walking.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Wraps legs around chair legs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Rocks in chair while seated at desk or table.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Feet out while seated at desk or table.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Falls out of chair when seated at desk or table.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Leans on walls, furniture, or other people for support when standing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>When seated on floor, cannot sit up without support.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Sits on desk, or holds head up in hands while seated at desk.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Has poor coordination; appears clumsy.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPM Main Classroom**

- **Ocular - motor control**
  - The ability to move the eyes in a smooth, functional manner, such as when tracking an object or quickly shifting gaze from one object to another.
  - This capacity is integrated with the visual and vestibular systems.
  - Item Example: Have difficulty controlling eye movements when following objects like a ball with his/her eyes.

- **Postural control**
  - The ability to integrate multisensory information particularly from the **vestibular and proprioceptive** in order to control body movement and position.
  - For example: A child who is unable to sit up straight in a chair, or who needs to lean his head on one hand when writing, may be demonstrating poor postural control.
SPMs Support Best Practice 2014

- Examine contextual factors – can compare home & school/day care functioning
- Promote a problem solving approach
- Provide data on which to base decisions
- Promote collaboration between educational staff, home, and outside clinicians

Difference between SPM and Sensory Profile

- Compare home and main classroom
- Several environments: art, music, PE, recess, etc.
- Gives info on each sensory system
- Includes praxis (motor planning & ideation)
- Includes scale for social participation
- Easy and fast scoring
- Used as a test re-test to measure progress
- Strong psychometrics

5 to 12 yrs

SPM Quick Tips

2 to 5 yrs

Sensory-based strategies

Occupational Therapy Practice Guidelines for Children and Adolescents with Challenges in Sensory Processing and Sensory Integration (AOTA, 2011)
Sensory Integration

- ASI® (OT/SI)
- Siglobalnetwork.org

Requires special training to provide OT using an ASI® sensory integration approach.

Involves individualized intervention.

Using sensation in an intentional manner.

To support a child’s ability to succeed in daily life activities.

Sensory-based strategies

“OT using sensory-based interventions”

Often an integral part of early intervention, school-based practice, and community-based programs.

Emphasize collaborative team empowerment.

May be used in conjunction with ASI®.

Sensory-based strategies

- Reflect on the possibilities created when we are open to collaboration with other practitioners (PT, SLP, psych etc.)
- As well as facilitating collaborative team empowerment with family members & all school staff, (classroom, PE, music, art, cafeteria, recess, bus)
- ‘Upping the ante’ with everyone participating! Jane Case-Smith stated: the elements to effective intervention include: “…Intensity, contexts and family supports…” (AOTA Autism Conf Dec 2011)

Sensory Diet to Sensory Buffet

SPM Quick Tips strategies may include items for a sensory diet, term coined by Patricia Wilbarger, OT.

More inclusive terms such as Sensory lifestyle or sensory buffet, are used to emphasize diversity in the many possible sensorimotor activities that can be offered to the child (similar to the many food choices available at a buffet).
Why need to include Social Participation

<table>
<thead>
<tr>
<th>Environment</th>
<th>Addl. Rates</th>
<th>SPM &amp; SPM-P</th>
<th>Sensory Vabalities</th>
<th>Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Participation</td>
<td>Act.</td>
<td>2 Resolves peer conflicts without teacher intervention.</td>
<td>Cue the child to use perspective taking using specifics of the situation, by using the Superflex curriculum with cancer characters (Social Thinking)</td>
<td>Use a visual tracking system of self-initiation tied with reward.</td>
</tr>
</tbody>
</table>

Sensory Integration Special Interest Section Quarterly, 34(3), 1-4.

Sensory Integration Research
Examine effectiveness of therapeutic techniques with ASITM
Outcomes Focused Research
Clear identification of intervention outcomes
These charges can also be applied to sensory-based strategies

How do school based therapists choose what strategies to use?
Collins, A., & Dworkin, R. J. (2011)
Pilot study of the effectiveness of weighted vests

Conclusion:
• Results indicated that weighted vests were not effective in increasing time on task.
• The lack of an established treatment protocol strengthens the need to use intervention with systematic data collection.
Need: “data driven intervention” (Schaff)
Mulligan and Trolley-Hanson (AOTA, 2012)*

- Naturalistic interventions in context of daily living at school, home and in the community
- Change from us being the expert, to team members being the experts in their environments
- Important to include data to see if what we are doing is working

*Early Intervention for Young Children with ASD

TABLE OF CONTENTS (cont)

Case Examples

Case A: Child has difficulty tolerating clothes Modulation

Case B: Child was removed from a Montessori school because of being too “aggressive” Perceptual

Case C: Kindergarten child is reprimanded for not sitting cross-legged when on the rug Postural

Case D: Preschool child diagnosed with autism is unable to dress himself Praxis

5 “PROCEDURES” TO CONSIDER WHEN SUGGESTING SPM Quick Tips

Each Quick Tip focuses on either:

1) Addressing the underlying deficits
2) Providing family/staff/peer training to increase awareness, change attitude and interaction skills, provide support and share resources
3) Teaching self advocacy
4) Adapting task / materials / equipment / environment
5) Using cognitive and/or behavioral strategies to teach social skills and support social participation
The SPM & SPM-P Quick Tips

What the SPM Quick Tips Is

- A navigation tool to help answer the question “What is next?” following the use of the SPM
- A framework based on careful standardized assessment and developed from observations across multiple environments of the child’s sensory processing challenges
- A doorway into clinical reasoning for presenting possibilities to the team
- A process intended to help team members collaborate and develop the skills that will make them the “experts” in supporting the child (capacity building)

The SPM Quick Tips Is (cont)

- A springboard for guiding the team in brainstorming, idea generation, and problem solving
- A tool to support practitioners in using clinical reasoning and consultation skills in the intervention process
- A convenient color-coded navigation tool targeting a child’s sensory processing in multiple environments
- A data recording system to measure the effectiveness of progress monitoring
- A means of measuring qualitative progress through staff responses and quantitative progress through use of the SPM or SPM-P

Case A: Amellia (modulation disorder)

Presenting problems
- Third grade child has difficulty tolerating clothes, refuses to participate in “messy” activities, and does not participate with others.

SPM results
- Definite Dysfunction in Touch
- Some Problems in Social Participation

Contributing SP Items

- Touch
  - Home item 32: Become distressed by the feel of new clothes?
  - Home item 33: Pull away from being touched lightly?

Art form 2: Space between when body or face are dirty or sticky: glue, finger paints, food, etc.

Bus item 4: Mark Orientation item 28, Restless item 4. It is increased by uncontrolled touch of others (may itch out or withdraw)

PC item 53: Pulls self away from others.

Hypothesis: Difficulty modulating sensory input, specifically related to spontaneous touch, resulting in light-touch response to uninvited touch as well as other input.

Suggested approaches (From SPM Quick Tips)

1. Address the underlying deficit. Offer specific and graded interventions to increase the child’s tolerance and calm at level of arousal, adjusting the intensity, duration, quality, and predictability of the sensory experience in a very rhythmic and systematic manner according to the child’s needs. Examples: Gentle massage, soothing music, slow and rhythmic rocking, or driving in a different way.

- Offer a handful of scissors, brushes, sponges, locks, and whistles of light areas.
- Offer light-fitting clothes such as leggings, stockings, socks, and shorts.
- Offer a mixture of activities such as arts and crafts, music, and movement.
- Offer a variety of textures such as sand, water, and play dough.
- Offer a comfortable chair or bed, and let the child have control over how they want to sit or lie.
- Offer a choice of activities to do when the child is feeling overwhelmed or needs a break.
- Offer a choice of snacks to eat when the child is feeling hungry.
- Offer a choice of activities to do when the child is feeling bored.

2. Provide family/staff member training to increase awareness, change attitudes, and integrate skills, promote support, and share resources.
- In facilitate understanding and support, team staff need to know what the child can feel, their level of frustration, and how to deal with this with strategies that are developmentally appropriate. This can be done in a group setting or one-on-one.
- Teach the staff to stay an arm’s length away when standing in line. Describe them from the side, and use this as a teaching tool.
- Avoid touching the child lightly, both from behind, without warning, or as a “joke,” as this can cause a “fight, flight, or fright” response. Request that the child remain calm and give the child a little more space during socializing or group activities.

3. Teach self-regulation as soon as it is appropriate to do so.
- Students need their own space (i.e., a designated area where their belongings, books, and personal items are kept).
- Students need to have control over their environment, including the ability to control their own space.

4. Adopt the task, materials, equipment, and/or environment.
- Separate space areas to prevent possible touching by others (e.g., in a classroom setting).
- Designate specific activity areas (e.g., computer, library, or office) where the child can go to feel safe and be alone.
- Place the child at the front or back of the line to avoid touching by others.
- Give the child a new book to hold or a pressure vest to wear while standing in line.
- Encourage group teams, or partner groups in which the activity of the group demands the child (both regulate and participate).

5. Use cognitive and/or behavioral strategies to teach social skills and support social participation.
- Remind the child of ways to communicate instead of pulling back, such as saying “I don’t touch me” or “I need more space.” This allows them to use language instead of physical force to achieve their needs, which may not serve the words to use when they are feeling this way.
- Read the Sensory Story “Outside recess” to develop an effective outcome with the following: Going to recess is easier when I get my body ready. When I’m preparing for recess, I give myself lots of hugs and cut back on my sensory input. When I’m in recess, I give myself lots of attention.”

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SPM Quick Tips is NOT

- Prescriptive
- A watered down version of OT/SI (ASI™)
- A cookbook of activities based on problematic behavior and diagnosis
- A pre-designed plan to provide to teachers and parents
- A replacement for referrals for additional services
- A replacement for additional services

"The invariable mark of wisdom is to see the miraculous in the common."
Ralph Waldo Emerson

Development of SPM Quick Tips

While working on the ‘The SASI’ (pre SPM)
School Assessment of Sensory Integration

Collaborated with Danette Rowley, OT in Canada
When SASI became SPM in 2007

Obtained permission from WPS, the publisher of the SPMs, to be able to relate the Quick Tips to actual SPM items

Held focus groups at workshops worldwide during optional ‘Lunch with Diana’ to obtain ideas/feedback regarding Quick Tips

A few in the HUGE global village!

Katie Allgood, Kathy Barrett, Colleen Basaraba, Rena Baxter, Danielle Bell, Cheryl Domino, Dave Herzberg, Debbie Hinerfeld, Jennifer Brady-Johnson, Sarah Johnson, Heather Miller-Kuhaneck, Cristy Mendoza, Victoria Nackle, Amy Niezrecki, Carol Olson and her graduate students, Diane Parham, Thomas Passerino, Eric Polz, Jocelyn Reynolds, Pat Rose, Rick Ruess, Kathy Sanders’ team, Deanna Sava, Jim Spear, Sue Swindeman, Monique Taylor, Kris Tuma, Renee Watling, Deb Wilson, Maureen Kane-Wineland, Janet Wright, workshop attendees throughout North America, England, Scotland, N. Ireland, Ireland, Australia…and many more!

Case studies using SPM QTs

* 2006 (Opatia) Dx: ED: social participation…praxis
* 2007 (Dustin) Dx: ADHD… Also sensory issues?
* 2008 (CCNS) Dx: Autism…severe (self contained)
* 2009 (A) Dx: Autism…preschooler…praxis
* 2010 (FM-Declan): Expelled from Montessori
* 2011 (QT) Kg: Vestibular-postural- bilateral
* 2012 (Mason) Dx: Severe LD…Praxis
* 2012 (National and international case studies)
* 2013 (Bismarck ND preschool study): Prevention
* 2013 (John): Behavior prob… OR to sound/touch
* Summer 2013 (John): ASI (OT/SI)

KG CASE STUDY

Jan 14 through April-1-11

- Unable to sit cross legged & is reprimanded (All classrooms)
- Not able to stick to steady beat (Music)
- Collides into others (PE)

Vestibular bilateral integration: Postural Disorder
Rocks in his chair
Wraps his feet around the chair legs

Side sits in his classroom, resting on the back of his hand

When tries to sit cross legged
Has to hold his feet to stay sitting up
Supports himself with his arms under his chin

Or, has to hold his legs
Side sits in music

In library, he is also in trouble... outside of rug boundaries, leaning on his hands

Though engaged, leans head on hand

He leaned against the ruler and said, “This holds me up”

He told me his legs were tired and he wanted to sit down
He turns his paper instead of making postural adjustments

His tone impacts his grip
He uses wrist and arm movements

Collapses instead of putting arms out for protective extension

Additional Clinical Observations:
Poor stability
Poor ocular tracking
Vestibular Nuclei

Vestibular Receptors
Semicircular Canals and Otolith Organs

Vestibular Receptors
Semicircular Canals
and Endolymph Fluid

Vestibular Receptors
Saccule / Utricle (Head tilt/linear movement)
### The SPM & SPM-P Quick Tips

Diana A. Henry, MS, OTR/L, FAOTA

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**Vestibular System Schematic**

Schematic diagram of the central connections of the vestibular system.

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**Vestibular Connections to the Eye**


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**Student Observation by PT at H.S. Elementary School**

QT was observed by the PT during his PE class.

---

**Environment** | SPM Item #s | Vestibular SPM Items | Tips
--- | --- | --- | ---
Main classroom | 82 | Has poor coordination; appears clumsy. | Postural control: Puff, peek table; offer visual feedback proprioceptive feedback about which hand to use with a band, string, weight; encourage fine motor activities including picking up a string of beans on a table and at home.
Home | 50 | Falls out of a chair when shifting their body? | Postural control: Give a chair with a pillow on it and cushions; let the child sit in different positions such as having the back of the chair towards the table, allow child to sit on the floor, provide lots of opportunities for swinging, jumping and pushing; offer various ways to sit when on floor; lying on floor; side sit to floor; let the child do the Wobbling pump; Take to the playground to use climbing walls and swings.
Basic | 13 | Has difficulty moving body to rhythm (spinning hands, tapping feet, etc.). | Postural control: Slow down and repeat the movements before using the toy. Do big movements; provide additional visual, auditory, and tactile cues of how to fall over; Offer a visual/tactile proprioceptive reminder about which hand to use with a band, string, weight; Break down sequence into smaller steps on which does just the hands or just the feet.
Hy Ed | 70 | Losses balance when running or playing with peers. | Postural control: Encourage play in obstacle courses; provide opportunities to walk on uneven surfaces such as floor mats, curbs and docks; being the play in the ground such as using scooter boards while on the boat; watch for lack of joints borne on bone instead of using muscles while weight bearing; provide movement while asking for core stabilization; encourage climbing activities.

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Facebook: Henry Occupational Therapy
SPM Team Meeting: 1-4-11
Quick Tips were used to brainstorm ideas

Water helper strategy & teacher has an ‘ah ha’ moment re touch and effort

January 27, 2011 KG teacher wrote:

He carries the water bottle bin to & from recess

The students love my spinning center

He turns his chair when he needs to

Permitted to sit alternative ways

“Now, I am not hearing impulsive calling out when sitting on the rug”

Climbing ON equipment, instead of just playing chase

Class is doing: The Rocking Puppy, Spider Push Ups and Airplane

Electronic Quick Tips will allow recess aide to record # of times uses climbing equipment
RECORDING DATA: Why & How
Increasing number of research studies published in the American Journal of Occupational Therapy (AJOT) employ quantitative designs and answer basic research questions. However, a need remains for examining program effectiveness (Brown, 2010 & AOTA School Specialty Conference, July 2013).

Therefore, each SPM Quick Tips team member is provided a Quick Tips Record Form to record each time they implement a strategy.

RECORDING DATA: Who
All who are on the child’s team can participate in implementing sensory-based strategies.

Home: parents, other family members, caregivers, baby sitters and all therapists (OT, PT, SLP).

School: main classroom teacher, sped teachers, psychologist, school counselor, social worker, art, music, PE teacher, library staff, paraprofessionals (in classroom, cafeteria, on playground, bus) & day care

Guidelines for using the QT Record Form
- Use alarm system on phone, tablet, computer, etc. as a reminder
- Group similar QTs to be completed daily with convenience & ease
- Have the QT Record Form visible (place on fridge vs. putting in a drawer)
- As QTs are digitally tallied, place a # in box to indicate the # of times the QT has been used. Don’t use an x.
- Put the QT Record Form in the same location every time
- Complete the QT Record Form at the same time each day/multiple times throughout the day (e.g., breakfast, after school, supper, bedtime)
- If you are having difficulty recording the Quick Tips, please let your therapist know you need assistance.

March 8, 2011
his PE teacher wrote:
We had scooter relay races on their belly
We ran through 3 part obstacle courses
We begin class with supermans and yoga poses to hold (tree, mountain)
We used balloons to hit in the air, to the wall and back and forth with each other

He is more focused and is not bumping into other students or walls as he had