



Your Therapy Source News

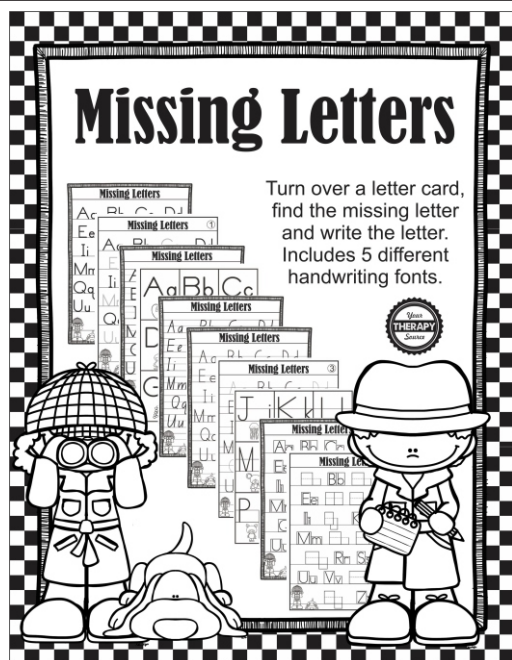
**Digital magazine for pediatric
occupational and physical therapists.**

www.YourTherapySource.com



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New and Sale Products



Missing Letters

By: Your Therapy Source Inc

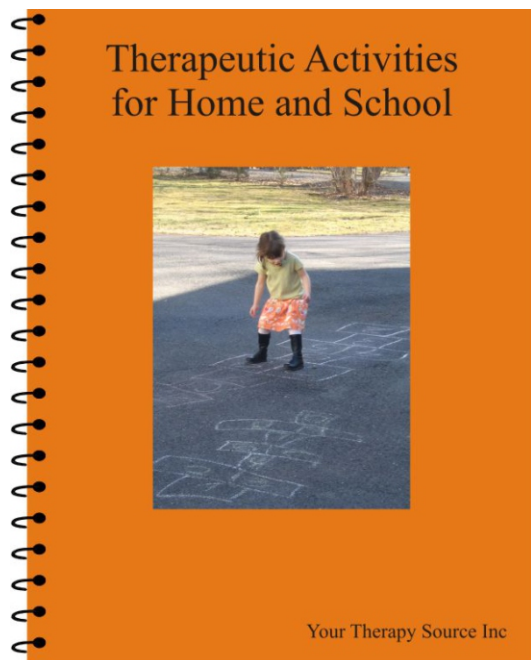
Summary: Missing Letters includes the materials to play the game where you turn over a letter flash card, visually scan to look for the missing letter and write/trace the letter. The first player to write all 26 letters is the winner! Includes 5 different fonts!

Price: \$3.99

Sale Price: \$1.99 until 4/30/16

FIND OUT MORE AT

<http://www.yourtherapysource.com/missingletters.html>



Therapeutic Activities for Home and School

By: Your Therapy Source Inc

Summary: Download of electronic book of therapeutic activity suggestions for throughout the day at home and school. Includes 48 reproducible forms and activity sheets.

Price: \$16.95

Sale Price: \$9.95 until 4/30/16

FIND OUT MORE AT

<http://www.yourtherapysource.com/therexdownload.html>

15 Pre-Handwriting Factors Leading to Successful Handwriting in Children

A recent 33 question survey on the pre-handwriting factors needed for successful handwriting was completed in 2015 by 535 occupational therapists and occupational therapy assistants (from the USA). The responses from the OT/COTAs indicated the following:

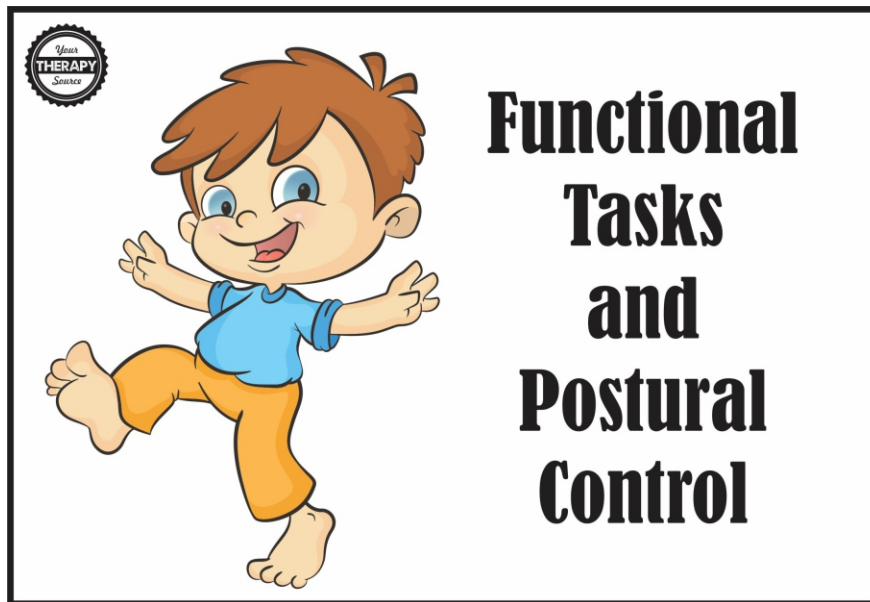
1. 95% answered that the ability of a child to copy vertical lines, horizontal lines, circles, squares and triangles was a good predictor of handwriting success.
2. 98% felt the the ability to imitate and copy an oblique cross (indicates crossing midline) was important for handwriting success.
3. 77% reported visual perceptual skills were very important for the development of handwriting skills. Sixty eight percent felt that visual motor integration was the most important visual perceptual skills for handwriting success.
4. 83% felt that being able to stabilize the paper with the non dominant hand was very important for the development of handwriting.
5. 74% felt that hand dominance was important for handwriting success.
6. 56% felt that cognitive skills were important for the development of handwriting. Attention, praxis and motor learning were deemed the most important cognitive skills.
7. 73% reported motor planning was important for handwriting success.
8. 43% felt kinesthesia and proprioception were very important for handwriting success.
9. 82% reported body scheme was very important for the development of handwriting.
10. 67% felt the dynamic tripod grasp was the most functional for handwriting success.
11. 56% felt that an immature scissor skill grasp results in an inefficient pencil grasp.
12. 55% reported purposeful scribbling is needed for letter formation and letter directionality.
13. 43% felt that in hand manipulation skills are very important for handwriting success.
14. 50% reported that bilateral integration skills are very important for the development of handwriting.
15. Postural control was ranked as the most important initial area of concern followed by proximal joint stability, intrinsic hand strength and the arches of the hand.

Reference: Shah, Lalitchandra J., et al. "Study of Pre-Handwriting Factors Necessary for Successful Handwriting in Children." World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering 10.3 (2016): 643-650. Read the full article here <http://www.waset.org/publications/10003772>



15 Pre-Handwriting Factors Leading to Successful Handwriting in Children

Functional Tasks, Postural Control and CP



Functional Tasks and Postural Control

Physical Therapy published research examining postural control during a functional play activity. Previous research has indicated that when motor tasks are made more relevant through functional tasks, performance improves, including in children with movement pathology.

The participants in the study included 30 children with cerebral palsy who were compared with 30 typically developing children during a single measurement period. Postural sway was quantified using a portable force platform system during a precision manual functional play task and a baseline condition of no task. Postural sway variability and postural sway regularity were analyzed. The results indicated the following:

an apparent difference in postural control (greater irregularity, greater sway variability) during quiet stance between children with CP and peers with typical development
this difference was reduced during the performance of the precision functional play task.
The researchers concluded that the postural control system is flexible and adaptable even with the pathological features associated with cerebral palsy.

Reference: Schmit, J. M., Riley, M., Cummins-Sebree, S., Schmitt, L., & Shockley, K. (2016). Functional Task Constraints Foster Enhanced Postural Control in Children With Cerebral Palsy. *Physical Therapy*, 96(3), 348-354. Accessed March 03, 2016. <http://dx.doi.org/10.2522/ptj.20140425>.

Check out **Play Strong: Activities to Promote Muscle Strengthening in Children Through Play**. This is a collection of 40+ activities that promote muscle strengthening in children. This is an excellent resource for pediatric therapists, parents and physical educators. Find out more here <http://www.yourtherapysource.com/playstrong>

10 Calming Vestibular Activities for the Classroom



Here are 10 calming vestibular activities for the classroom:

1. Rocking back and forth in a rocking chair.
2. Perform gentle stretches especially the neck and back.
3. Slow marching in a straight line.
4. Inverting the head (some children find this calming, some children dislike this position) ie Downward Dog yoga pose - http://yourtherapysource.com/files/Yoga_Cards_Freebie.pdf
5. Yoga - <http://yourtherapysource.com/yogacards.html>
6. Tai Chi for Children - <http://www.yourtherapysource.com/taichi.html>
7. Slow rocking sitting on a therapy ball.
8. Tuck and Rock – lay on the floor on your back, bring your knees to the chest and wrap arms/hands around knees so body is in a ball shape. Rock back and forth slowly on your back. This activity is included in Physical Activity Cards and Game packet - <http://www.yourtherapysource.com/activitycards.html>
9. Rocking back and forth on all fours on the floor.
10. Animal walks especially if the head is inverted ie bear walk, slow donkey kicks, etc. Try Animal Actions A-Z for ideas - <http://yourtherapysource.com/animalactionsaz.html>

Need more calming activities? Check out the **Self Calming Strategies Packet** which provides 16 helpful strategies to encourage self calming skills in children. Find out more at <http://yourtherapysource.com/calm.html>

Self Regulation, Yoga and Preschoolers



Self Regulation, Yoga and Preschoolers

A recent year long study was published in the *Journal of Child and Family Studies* on 29 children ages 3-5 to evaluate the effectiveness of mindfulness-based yoga intervention on self-regulation skills. Sixteen of the preschoolers participated in a mindful yoga intervention group taught by the classroom teacher. Parent reports and assessments were completed on children's self-regulation (i.e., attention, delay of gratification and inhibitory control). The results indicated the following:

1. the assessments showed significant effects of the mindful yoga intervention on all three indices of self-regulation.
2. some evidence showed that the children who were most at risk of self-regulation dysfunction benefitted the most from the mindful yoga intervention.

Read *Self Regulation Activities* for 6 fun games to encourage self regulation - <http://yourtherapysource.com/blog1/2009/06/19/self-regulation-activities/>. Check out all these yoga resources for children to make it super easy to introduce yoga into the preschool classroom - <http://www.yourtherapysource.com/yoga.html>.

Reference: Razza, Rachel A., Dessa Bergen-Cico, and Kimberly Raymond. "Enhancing preschoolers' self-regulation via mindful yoga." *Journal of Child and Family Studies* 24.2 (2015): 372-385.

Vibration Threshold and Toe Walking in Children



Vibration Threshold and Toe Walking in Children

Pediatric Physical Therapy published research comparing distal vibratory perception threshold and sensation in 11 children who toe walked and 15 controls. The mean vibration perception threshold at the metacarpal and metatarsal phalangeal joints was calculated for each participant. In addition, the Short Sensory Profile was completed by each participant's parent or caregiver. The results indicated the following:

the mean vibration threshold was highly correlated in both groups – it was higher in toe walkers compared to controls.

toe walkers were more likely to have a total Short Sensory Profile score in the “probably difference” or “definite difference” categories.

The researchers concluded that sensation should be evaluated in toe walkers.

Reference: Ganley, Kathleen J. PT, PhD; Behnke, Claire PT, DPT. Distal Vibration Perception Threshold in Children Who Toe Walk. *Pediatric Physical Therapy*: Summer 2016 – Volume 28 – Issue 2 – p 187–191. doi: 10.1097/PEP.0000000000000241

Handedness, Language and Autism

Did you know that about 90% of humans are right handed? Did you also know that research indicates a decreased degree of right-handedness in children with autism spectrum disorders (ASD)? In addition, other research found that children with ASD tended to have more mixed-handedness, but that those who had a definite hand preference performed better on motor, language, and cognitive tests than those who did not.

Here are some more interesting facts for the majority of the population:

1. the left hemisphere plays a dominant role in both manual skills and language functions.
2. handedness is generally established by about 3 years of age, with changes in the degree of handedness occurring until school age.
3. children who frequently cross the midline are more strongly right- or left-handed and crossing values correlated with handedness scores.

Perceptual and Motor Skills published research on handedness, assessed by task performance, and standardized receptive and expressive language tests. The subjects included 110 children with ASD (96 boys; M age = 8.3 years, SD = 3.8) and 45 typically developing children (37 boys; M age = 8.6 years, SD = 4.3), 3 to 17 years of age. The results indicated that:

1. children in the ASD group had a lower handedness score (was less strongly lateralized) than the control group.
2. children in the ASD group exhibited a small effect of handedness on language; right-handers had better language than non-right-handers.

The authors concluded that poorer language prognosis may be associated with left- or mixed-handedness in autism spectrum disorder.

Reference: Tracey A. Knaus, Jodi Kamps, and Anne L. Foundas. Handedness in Children with Autism Spectrum Disorder. *Percept Mot Skills* 0031512516637021, first published on March 16, 2016 doi:10.1177/0031512516637021

Need activity ideas to work on crossing midline and bilateral coordination? Check out 25 Bilateral Coordination Activities - <http://yourtherapysource.com/bilateralcoordination.html>



Handedness, Language and Autism

Kinesthetic Deficits in Children with DCD



Research in Developmental Disabilities published research comparing kinesthetic sensitivity in 30 children with developmental coordination disorder (DCD) and 30 typically developing (TD) children all between 6 and 11 years old. Each child put their forearms on a passive motion apparatus which extended the elbow joint at constant velocities. The children had to focus on detecting passive arm motion and press a trigger held in their left hand once they sensed it. The detection time was measured each time.

The results indicated the following:

1. DCD group was significantly slower detecting passive motion than TD children.
2. kinesthetic sensitivity was worse in DCD than TD children for age groups beyond six years of age suggesting that individuals with DCD lag behind their TD counterparts in kinesthetic sensitivity.
3. between the ages of 7 and 11 years the difference between groups is quantifiable and significant.
4. 11 year old children with DCD performed similar to 7 year old TD children.

Reference: Kuan-yi Li et al. Kinesthetic deficit in children with developmental coordination disorder. *Research in Developmental Disabilities*. Volume 38, March 2015, Pages 125–133

Now You See It, Now You Don't (<http://www.yourtherapysource.com/nowyouseeit>) includes 20 worksheets to practice kinesthetic skills without visual input. Some children rely too much on the visual system when completing visual motor activities. These worksheets encourage a child to use his/her kinesthetic sense (where the body is in space) to complete a visual motor task rather than relying on the visual system. Download sample page from *Now You See It, Now You Don't* at http://yourtherapysource.com/files/now_you_see_it_freebie.pdf

Delayed Walking with Autism and Intellectual Disability



Pediatrics published a large study on the relationship between delayed walking in children and the severity of intellectual disability in children with autism spectrum disorders (ASD) versus other non-ASD diagnoses. The study sample included 1185 individuals (ASD, $n = 903$; non-ASD, $n = 282$) who received an evaluation at age 4 to 12 years that included an estimate of nonverbal IQ (NVIQ) and retrospectively reported age of walking from the Autism Diagnostic Interview–Revised. Delayed walking was defined as occurring at ≥ 16 months.

The results indicated the following:

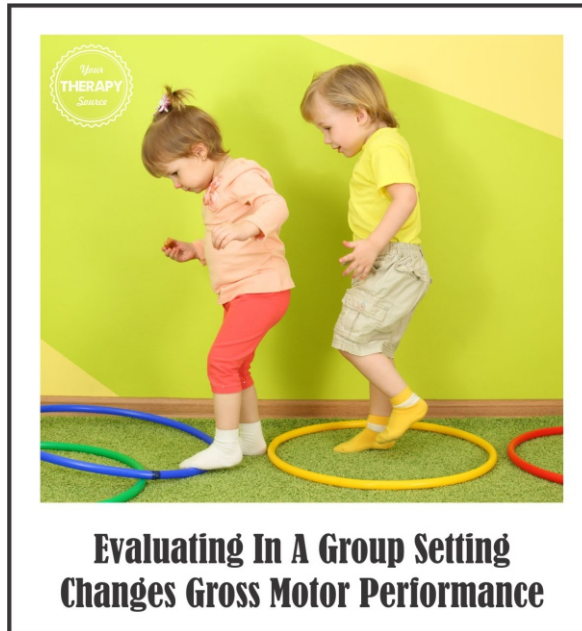
1. children with ASD were less likely to exhibit delayed walking than those with non-ASD diagnoses
2. rates of delayed walking for ASD was 13%
3. rates of delayed walking for non-ASD was 19%
4. rates of delayed walking in those with NVIQ > 85 was 31%
5. rates of delayed walking in children with NVIQ < 70 was 60%

Overall, the difference between the children with ASD and those with non-ASD diagnosis was larger at lower levels of NVIQ.

The researchers concluded that lower IQ scores were associated with increased rates of late walking in both ASD and non-ASD groups but children with low IQ were more likely to show delayed walking in the absence of ASD.

Reference: Somer L. Bishop, Audrey Thurm, Cristan Farmer, Catherine Lord. Autism Spectrum Disorder, Intellectual Disability, and Delayed Walking. *Pediatrics*. March 2016, VOLUME 137 / ISSUE 3.

Evaluating In A Group Setting Changes Gross Motor Performance



Pediatric Physical and Occupational Therapy in Pediatrics published research comparing differences in gross motor performance of 20 children ages 3-5 with motor delays when assessed individually versus assessment in a group setting among 42 peers with typical development (TD). Each child with motor delays was tested 4-8 days apart in an individual setting and in a group setting with two to four peers with typical development. The assessment consisted of 10 different motor skills from the Peabody Developmental Motor Scales-2. Performance of each item was videotaped and scored by a blinded researcher. The results indicated the following:

gross motor performance was significantly different between the two settings, with 14 of 20 children demonstrating better performance in the group setting.

children performed better on locomotion items.

The researchers concluded that the higher scores in the group setting may be due to the influence of competition, motivation, or modeling and recommended evaluating a child in a group setting as part of the overall assessment.

Reference: Deanne Fay, Tawna Wilkinson, Michelle Wagoner, Danna Brooks, Lauren Quinn & Andrea Turnell. Effect of Group Setting on Gross Motor Performance in Children 3–5 Years Old with Motor Delays. *Pediatric Physical and Occupational Therapy in Pediatrics*. Published online February 26, 2016. DOI:10.3109/01942638.2015.1129387

Sensory Motor Group Activities A to Z: Download of an electronic book of over 50 sensory motor group activities for every letter of the alphabet plus over 20 printable sheets to complement the activities. Find out more at <http://yourtherapysource.com/atoz.html>

5 Ways for Pediatric Therapists to Empower Children, Parents and Teachers



Research in Developmental Disabilities published research on the experiences and needs of parents of young children (aged 2-4 years) with cerebral palsy (CP) regarding their child's physical and occupational therapy process in a rehabilitation setting. The results indicated that service providers should continually adapt their role to parents' needs of information, communication and partnership, and they should support and facilitate parents in becoming empowered.

Since the ultimate goal of all therapy is independence which requires carry over of therapeutic interventions it is essential that

pediatric occupational and physical therapists learn how to empower children, parents and teachers. Here are 5 suggestions:

- 1. Explain.** Our primary job as therapists should be to explain why you are doing a certain activity, why you are working on a certain goal or why you need to modify the environment. If someone knows why they are doing something it certainly makes it easier to remember to carry out. For some children, it can be very helpful to explain what you are going to do before you do it.
Check out the What? Why? How? (<http://www.yourtherapysource.com/handouts.html>) series for simple handouts to help explain therapeutic activities.
- 2. Teach.** Once you explain why you are doing something, make sure you teach the child, parent or teacher how to do the same at home or in the classroom. Offer suggestions on how the same activities can be carried out in different settings ie Therapeutic Activities for Home and School - <http://www.yourtherapysource.com/therexdownload.html>
- 3. Answer questions.** Make sure you tell all team members to ask questions if they have them and that no question is too basic. Everyone learns from each other.
- 4. Communicate.** Keep lines of communication open so that questions can be answered. Make sure you listen to all team members. They are with the child so many more hours in a day than us. First and foremost, listen to the child. It can be hard to communicate with all team members during a busy day. Try School and Home Communication Forms - <http://www.yourtherapysource.com/commforms.html>.
- 5. Encourage students, parents and teachers** to be involved as possible in reaching the therapy goals. Provide opportunities for children and parents to work together on activities. Encourage parents and teachers to advocate for younger children. Help older children to advocate for themselves.

Reference: Kruijsen-Terpstra AJ et al. Parents' experiences and needs regarding physical and occupational therapy for their young children with cerebral palsy. *Res Dev Disabil*. 2016 Mar 10;53-54:314-322. doi: 10.1016/j.ridd.2016.02.012. [Epub ahead of print]

5 Best Answers to Encourage Executive Functioning Skills

Anyone who works with children knows that children ask A LOT of questions. They ask because they want to learn things. They ask because they already know things and just want to confirm it. They ask to make conversation. They ask to get attention. And sometime they just ask (and ask, and ask, and then ask again). The truth is that children are trying to talk to us, trying to engage with us, and trying to learn from us. It is a teaching moment- don't miss it!

Many of the children I work with as an occupational therapist struggle with executive functioning skills (such as children on the autism spectrum, children with learning disabilities and attention disorders, and children with developmental delays). One of the best tools (and habits) I use as a therapist is that I rarely answer children's questions directly. Instead, I find that giving answers that encourage the child to think and respond are a great way to develop executive functioning skills and higher level thinking, such as: making inferences, using logic and reasoning, problem solving, flexible thinking, making predictions, critical thinking and skepticism and social/conversation skills



5 Best Answers to a Child's Questions to Encourage Executive Functioning Skills

5. What do you think?

Example: Child: Why can't I eat the playdoh? Adult: What do you think?

The quickest and easiest answer. Often a great way to stop repetitive questioning when the child knows the answer and is just seeking attention or needs to confirm a rule or boundary (remember children learn through repetition, so confirming an answer they already know is an important part of learning to control one's behavior and develop self-regulation skills). I also find that for children with oppositional or defiant behavior patterns this is an approach to build shared control and promote compliance. For children who struggle with social skills, this may be an attempt at engagement and by asking a question in return you can continue to work on the co-regulation skills needed for functional conversation skills.

4. How can we find out? Who could we ask? Where could we find that answer?

Example: Child: Why is the balance beam tippy today? Adult: I'm not sure, how could we find out? (and how can we fix it?)

When there is actually an answer to be discovered, giving them clues about how they could find out on their own. This is a great chance to provide a "just right challenge" for their cognitive skills by providing hints and clues (scaffolding) and leading them to discover an answer. The process of discovery is a great time to work on the steps of problem-solving: initiation of action, making a plan, executing a plan, monitoring and self-correction of work, and task completion.

5 Best Answers to Encourage Executive Functioning Skills (Continued)

3. I don't know, let's make a guess together.

Example: Child: Why is the swing squeaking? Adult: I don't know, let's look closely and make a guess together? When there isn't an answer or there is not an age-appropriate answer, it is ok to make a guess together (or a theory or hypothesis for older children). This is a great time to focus on flexible thinking skills, especially for children who are very literal or think in absolutes (black and white thinking). The cognitive skill of making a guess can be hard for children, but with a therapist role modeling for them it can stretch them more complex thinking skills (don't be surprised if a child's guess is completely wrong, being right or wrong isn't the point!)



2 What could happen if you ____? (Or, how would that make ____ feel?)

Example: Child: Can I wear my tutu in OT? Adult: What might happen to a tutu while we swing or play with shaving cream today? How would you feel if your tutu got dirty? Children often ask "what if" or "can I" questions. Rather than answer, let the child think about the reasoning behind the answer. It is a great chance to make predictions about consequences of actions (a key part of developing self-regulation). This is a great way to build social skills as well, focusing on theory of mind, social thinking, and emotional regulation skills.

1. Give an outrageous or silly answer and let them correct you.

Example: Child: Can I wash my hands? Adult: Nope, this week at OT we are only washing our elbows and ears.

My favorite response is to give an answer that makes absolutely no sense. Children love to correct adults and be "right," and this gives a wonderful chance to have your child try to convince you through logic skills. This also helps to build a healthy amount of skepticism (and critical thinking skills) that all children need. This can be hard for children who are very literal or struggle with language skills, but can also present a great opportunity to build social skills, sense of humor, while promoting higher level thinking skills.

This article is written is by a guest blogger, Paige Hays, OTR. She is an occupational therapist who provides in-home, pediatric occupational therapy services in the south metro area of the Twin Cities, MN through Paige Hays, Therapy Services, LLC. She is a mother of 2 girls, avid DIYer, and a highly skilled and experienced OT. She specializes in working in pediatrics, with diverse expertise ranging from cognition and sensory issues to working with children with neuromuscular disabilities or complex medical needs.

Don't forget to check out the Paige Hays Therapy Services Blog (<http://paigehays.net/blog/>) and follow on Facebook (<https://www.facebook.com/paigehays.net>).

Gross Motor Skills and the Development of Play

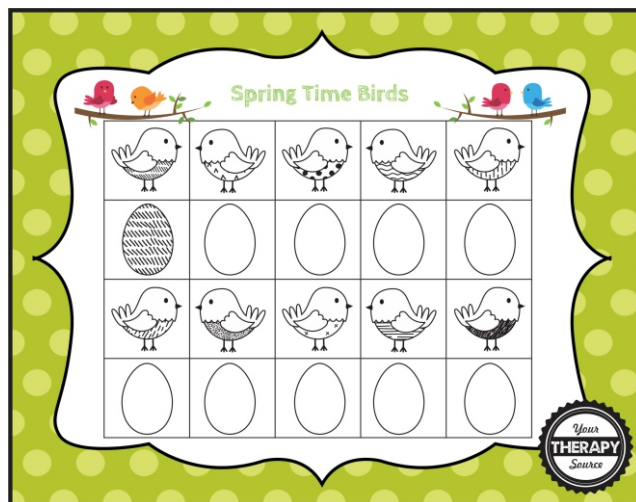


During 2016, I will be participating in a series written by occupational and physical therapy bloggers on developing 12 functional skills for children. Each month we will discuss the development of one functional skill in children addressing the many components of that skill. The functional skill in March was play skills.

Read the post here:

<http://yourtherapysource.com/blog1/2016/03/16/gross-motor-skills-and-the-development-of-play-in-children/>

Spring Time Eggs



Here is a Spring time bird visual motor activity – draw the pattern on the bird's belly on the egg. You can download the freebie at Your Therapy Source <http://yourtherapysource.com/freespringeggs.html>



Create three different activities with this download freebie from Your Therapy Source at <http://www.yourtherapysource.com/freespringtime.html>

Garbanzo Beans Sensory Bin



Today we made a garbanzo bean sensory bin. We purchased some dried garbanzo beans, also known as chickpeas, at the grocery store. Follow these steps to color the beans:

1. Pour the bag of beans into a plastic bag.
2. Add 2 dashes of rubbing alcohol (I am too lazy to measure but if you wanted to measure it is about 2 tsp) and lots of squeezes of food coloring.
3. Shake, shake and shake the bag some more to coat the beans.
4. Pour the beans out onto newspaper to dry.
5. Allow about 15 minutes to dry.

Once dry, the children can explore the sensory bin. The garbanzo beans provide some heavier input in a sensory bin compared to rice or regular dried beans. The bumpy texture provides a different type of tactile input as well.

This sensory bin is only for children who will not put small objects in their mouth. Garbanzo beans are small and solid so avoid with young children.

What is your favorite material for a sensory bin?

Sensory Mini Books and Charts: This electronic book includes 7 sensory mini books, 7 sensory charts, 7 sensory four square strips and over 100 picture word cards. The mini book titles include: TOUCH, MOVE, ATTENTION, CALMING DOWN, EAT, SMELL and

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