Your Therapy Source News

Digital magazine for pediatric occupational and physical therapists.

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www.YourTherapySource.com

New and Popular Products

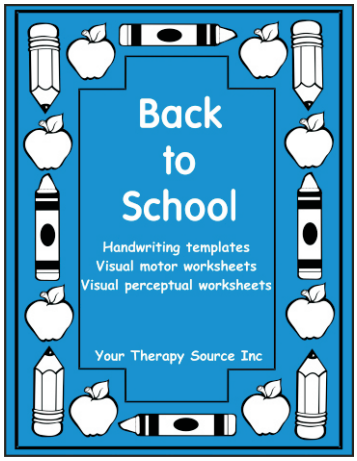
Visual Discrimination Puzzles

Download of a set of 24 puzzles that encourage visual discrimination skills, visual motor skills and gross motor skills.

List Price for electronic book: $4.99

SALE PRICE THROUGH AUGUST 15th - $1.99

www.YourTherapySource.com/visuald

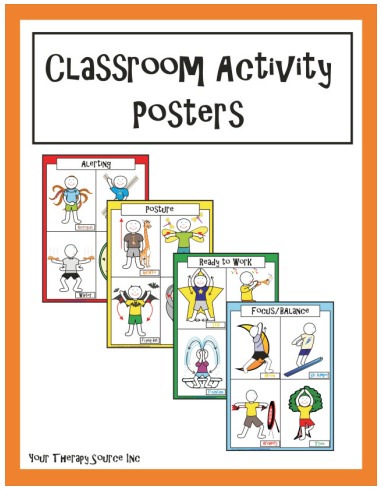


Back to School Handwriting Activities

Get over 30 pages of back to school handwriting templates, visual motor and visual perceptual worksheets.

List Price for electronic book: $4.99

www.YourTherapySource.com/backtoschool



Classroom Activity Posters

Download of 4 Large Posters including 16 individual exercises to complete in the classroom. Also includes simple video demonstration of exercises.

www.YourTherapySource.com/cap

Being Too Overprotective?

Yesterday the NY Times published an article entitled Can a Playground Be Too Safe? The article discusses that whether removing monkey bars and jungle gyms have actually reduced injuries over the years or not. In addition, it states the importance of children learning to take risks and overcoming their fears at a young age. With only "safe" playground equipment replacing older equipment how are we affecting children's development? Definitely worth the read.

Most children love to climb whether it be a tree or a jungle gym. If you are only climbing 4 feet off the ground into an enclosed area do you really feel like you accomplished the great climb? We wonder why children in the tween age group reduce their daily physical activity time. Perhaps it is because playgrounds are not so challenging anymore. Or maybe parents interfere when the play may become a bit risky ie Keep Away boys versus the girls.

If you are lucky enough to find a playground with a nice jungle gym let your child climb it. See if they can make it all the way to the top. Instead of saying no for a fear of falling, observe your child on the lower bars. Does it appear that they are being safe? Let them go a little higher. Be close by but not too close by if possible. If you do need to provide assistance, start with a verbal prompt i.e. "try putting your hand on this bar". If a verbal prompt is not sufficient offer a physical prompt i.e. placing the child's foot on the right bar. Maybe your child needs a verbal and a physical prompt with close supervision. Whatever it may be let them try it.

These tips hold true for when a child is practicing and learning any new skill. Obviously, it is best for the child to complete the skill independently. An adult should provide the least amount of assistance possible. Therefore the goals to complete a skill are as follows:

Independent with skill

Verbal prompts necessary to complete the skill independently

Physical prompts necessary to complete the skill independently

Physical assistance necessary to complete skill independently

50 Sensory Motor Activities for Kids!

Download of an electronic book of 50 sensory motor activities that get children moving.

www.YourTherapySource.com/50book

Are You The Best Person for the Job?

Do you ever ask yourself if you are the best person for the job? For any children who receive related services, hopefully this question is asked frequently. When teachers create class lists for the following school year, they usually make a recommendation based on the student and the teacher's style. The students move from grade level to grade level with different instructors. Does this get done for therapy services as well? When a new skill needs to be taught do you ever consider changing therapists? Or perhaps a goal is not being accomplished - do you ever consider it may be the therapist and not the child?

For some reason in the "therapy world", occupational, physical or speech therapists may see the same child for years. For some children this is beneficial. For example children who are medically fragile, their families may benefit from the continuity of the same therapist from year to year. Perhaps families feel comfortable with the same therapist since a bond has been created between the therapist and the child.

Many times the therapist's experience is taken into consideration when creating caseloads. For young children with cerebral palsy, a part of therapy is usually neurodevelomental treatment. Using their hands, the therapist attempts to facilitate proper movement patterns while inhibiting abnormal muscle tone. One therapist may be able to facilitate a child's movement patterns very differently than another. Perhaps ones hand placement is just slightly different or hand size is significantly different, this can influence neurodevelopmental treatment. Many time parents or teachers will say "I don't seem to do it as good as you". Therefore, something to consider when a child is not reaching a specific goal is to think about changing therapists. It is not to say that the current one is not good, but you never know what a different set of hands may illicit. If you do not want to change completely, another idea is to ask for another therapist to consult on the child. Maybe the therapists could do one cotreatment session to see if a different set of hands can help the child to achieve the goal.

What about different diagnoses? Some therapists work very well with children with certain diagnoses. Just like some teachers prefer to teach math over reading, some therapists prefer to work with children with autism instead of cerebral palsy or ambulatory children versus non ambulatory children. Therapists should look closely at what type of child they work best with and offer to help if that is their "niche".

What about the goal? If the goal requires a significant amount of assistance who might be best for the job? A small therapist may not be a good match. If the goal requires a significant amount of patience like learning to ride a bicycle, an individual with a short fuse may not be a good fit. If the goal is climbing the jungle gym to the highest point (see previous article on *Being Too Overprotective?*), a nervous individual may not be the best person for that job.

What about carry over at home or in the classroom? It is not always possible to have a choice of which adult can help, but if it is possible consider the adults' strengths and weaknesses. When teaching a skill like toilet training patience is a virtue. Teaching a child to do the monkey bars or a to use a fire pole, requires some strength and is not for the faint at heart.

Therefore, when a child is learning a new skill consider the therapist's style and experience in addition to the child's goals and diagnoses to create the best fit possible.

Recent Research - Cerebral Palsy

Influence of Age on Surgical Outcomes in Children with CP

A retrospective study was done to determine the influence of age on surgical outcomes in children with cerebral palsy. The study looked at 32 children with bilateral spastic cerebral palsy (17 males and 15 females) with ages ranging from 5 years 8 months old to 15 years 6 months old. Each subject had one multilevel surgical experience without any previous surgery, recent botox or intrathecal baclofen. In addition, the subjects were all ambulatory with a flexed knee gait, GMCFS levels II and III. Data was collected at 6 times from presurgical to 10 or more years postoperatively. Following statistical analysis, the results indicated that the older the child was at the time of surgery the better the long term results. There was no correlation between the age at the time of surgery and the number of initial surgical interventions that had to be performed. The researchers concluded that children with cerebral palsy who need multilevel surgeries will achieve better results at an older age compared to having the surgery at a younger age.

Reference: Svehlík M, Steinwender G, Kraus T, Saraph V, Lehmann T, Linhart WE, Zwick EB.The influence of age at single-event multilevel surgery on outcome in children with cerebral palsy who walk with flexed knee gait. Dev Med Child Neurol. 2011 Jun 29. doi: 10.1111/j.1469-8749.2011.03995.x. [Epub ahead of print]

Intrathecal Baclofen on Non Ambulatory Children wtih CP

Research was conducted with 38 children with severe spastic cerebral palsy and the use of intrathecal baclofen (ITB). Twenty children were assessed before receiving the ITB and at 9 and 18 months post ITB. The remaining 18 children waited 9 months to serve as a control period for the two groups. The results indicated the following:

- no significant changes in either group on the Pediatric Evaluation of Disability Inventory
- no significant changes on the Lifestyle Assessment Questionnaire in either group
- no change in the cost of new equipment in either group

When comparing the two groups during the first 9 month period when group 1 received the ITB but group 2 had not yet received the ITB the following was noted:

- significant difference between the two groups on the Modified Ashworth Score, the Penn Spasm score, mean range of motion and Caregiver Questionnaire

The researchers concluded that ITB in children with severe spastic cerebral palsy demonstrated improved quality of life in terms of comfort and ease of care. ITB did not appear to affect function, participation in society or cost of equipment.

Reference: Miller F. The effects of continuous intrathecal baclofen infusion in non-ambulant children with cerebral palsy. Dev Med Child Neurol. 2011 Jun 27. doi: 10.1111/j.1469-8749.2011.04026.x. [Epub ahead of print]

More Research on Cerebral Palsy

Bimanual Versus Constraint Therapy in Hemiplegia

Research was conducted comparing two groups of children ranging from 3.5 to 10 years old (42 in total) with hemiplegia. The children were randomly assigned to receive 90 hours of constraint induced movement therapy (CIMT) or 90 hours of bimanual training (HABIT). Following the training, both the CIMT and HABIT resulted in improved hand function as seen in scores on the Jebsen-Taylor Test of Hand Function (JTTHF) and Assisting Hand Assessment (AHA) scores. In addition, the Goal Attainment Scales revealed greater progress toward goals with the HABIT group. The researchers concluded that both treatment interventions, CIMT and HABIT, resulted in similar improvements in hand function with the HABIT possibly improving more on self determined goals.

Reference: Gordon AM, Hung YC, Brandao M, Ferre CL, Kuo HC, Friel K, Petra E, Chinnan A, Charles JR. Bimanual Training and Constraint-Induced Movement Therapy in Children With Hemiplegic Cerebral Palsy: A Randomized Trial. Neurorehabil Neural Repair. 2011 Jun 23. [Epub ahead of print]

Classification Systems for Cerebral Palsy

The Gross Motor Function Classification System (GMFCS) is widely used to describe the functional levels of children with cerebral palsy. There is also a Manual Ability Classification System (MACS) used to describe the functional use of the hands of children with cerebral palsy. Now an additional classification system has been developed - the Communication Function Classification System (CFCS) to describe everyday communication of children with cerebral palsy. You can view each classification at the following links:

Gross Motor Function Classification System
Manual Ability Classification System
Communication Function Classification System

Active Arms

Download of an electronic book of
30 activities for individuals
with moderate to significant motor delays

www.YourTherapySource.com/activearms

Cerebral Palsy and Hippotherapy

Hippotherapy and Cerebral Palsy

Developmental Medicine and Child Neurology published a meta analysis research study on hippotherapy and children with cerebral palsy. Out of 77 studies, 8 were included in the analysis. The results indicated the following:

> "Therapy was found to be effective in 76 out of 84 children with CP included in the intervention groups. The comparison groups comprised 89 children: 50 non-disabled and 39 with CP. A positive effect was shown in 21 of the children with CP in the comparison group regardless of the activity undertaken (i.e. physiotherapy, occupational therapy, sitting on a barrel or in an artificial saddle)"

Overall, hippotherapy and therapeutic horseback riding was shown to improve balance and postural control in children with cerebral palsy.

Reference: Zadnikar M, Kastrin A. Effects of hippotherapy and therapeutic horseback riding on postural control or balance in children with cerebral palsy: a meta-analysis. Dev Med Child Neurol. 2011 Aug;53(8):684-91. doi: 10.1111/j.1469-8749.2011.03951.x. Epub 2011 Mar 24.

Hip Pain in Children with Severe Cerebral Palsy

Disability and Rehabilitation published research on hip pain in children with severe cerebral palsy and hip dislocation. Seventy three children ages 4 through 10.8 years old had a total of 99 dislocated hips. Medical records were reviewed for previous physical therapy interventions (abduction therapy, no abduction therapy and abduction/ hippotherapy). Pain level was measured. In addition, radiographs and femoral head cartilage degenerative lesions were evaluated.

The results showed that 56.6% of the children had pain. The reports of pain were associated with the child's age, abduction therapy, previous hippotherapy and anterior changes of the femoral head. Pain levels were associated with the degree of femoral ante-version and the size of the degenerative cartilage changes.

The researchers concluded that hip pain in children with hip dislocation may be associated with extensive abduction therapy, hippotherapy and degenerative changes in the anterior femoral head.

Reference: Jóźźwiak, Marek; Harasymczuk, Piotr; Koch, Aleksander; Kotwicki, Tomasz Incidence and risk factors of hip joint pain in children with severe cerebral palsy. Disability and Rehabilitation, Volume 33, Numbers 15-16, October 2011 , pp. 1367-1372(6)

Hot Topics

Short Bursts of Vigorous Activity

The *American Journal of Human Biology* published research recently comparing moderate to vigorous physical activity in adolescents. Fifty seven adolescents (47 boys and 10 girls) were randomly assigned to a moderate intensity exercise group (running 3x/wk for 20 minute sessions) and a vigorous intensity group (20 meter sprints for 30 seconds). At the end of the 7 week program the moderate intensity group had competed 420 minutes of exercise compared to the 63 minutes of exercise in the vigorous intensity group. The results indicated that both groups exhibited significant improvements in cardiorespiratory fitness, blood pressure, body composition and insulin resistance.

Although the researchers recommend further research on this topic, the preliminary results are promising. It would not be difficult to squeeze in short, quick, bursts of physical activity during the school day to hopefully achieve the same benefits of longer, moderate intensity exercise.

Reference:
Robert Preidt. Study: Short bursts of exercise good for heart. Retreived from USA Today at http://yourlife.usatoday.com/fitness-food/exercise/story/2011/04/Study-Short-bursts-of-exercise-good-for-heart/45958456/1?csp=34news&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+UsatodaycomHealth-TopStories+%28News+-+Health+-+Top+Stories%29 on 7/24/11.

Heel Lift Effects on Children

Gait and Posture published research comparing heel lifts (10, 20 and 30mm) heights in 32 children with cerebral palsy, arthrogryposis and a control group. The cerebral palsy and arthrogryposis groups showed significant changes in the ankle, knee and pelvis whereas the control group only showed significant changes at the ankle. The higher the heel height resulted in a decrease in anterior pelvic tilt but increased knee flexion except in the control group. The researchers recommend an individualized approach to determine the proper heel height for each child.

Reference:Bartonek A, Lidbeck CM, Pettersson R, Weidenhielm EB, Eriksson M, Gutierrez-Farewik E. Influence of heel lifts during standing in children with motor disorders. Gait Posture. 2011 Jul 19. [Epub ahead of print]

Organized Sports

Many children participate in organized sports. Frequently the sport takes up a significant amount of practice and game time. Many parents assume that all this sports activity equals lots of physical activity time. They may want to think again.

According to recent research in the *Archives of Pediatric and Adolescent Medicine* many children are not all that physically active during organized sports. Two hundred children ages 7-14 years old wore accelerometers during various sports practices. The results indicated that overall participants had moderate to vigorous physical activity 46.1% of practice time. Soccer players, boys and children aged 7-10 years old exhibited increased moderate to vigorous physical activity compared to other participants.

The guidelines recommend that children participate in 60 minutes of moderate to vigorous physical activity per day. This study found that only 24% of the participants met the daily requirements at sports practices. Even worse was 11-14 year olds, whom only 10% met the daily requirements and only 2% of girl softball players.

Reference: Desiree Leek; Jordan A. Carlson; Kelli L. Cain; Sara Henrichon; Dori Rosenberg; Kevin Patrick; James F. Sallis Physical Activity During Youth Sports Practices Arch Pediatr Adolesc Med. 2011;165(4):294-299.

On the Web...

Handwriting versus Keyboarding

When assessing students for written productivity, handwriting speeds are frequently compared to keyboarding speeds. There are several helpful documents on the internet to help evaluate students:

1. Developing a Written Productivity Profile: Comparing handwriting to keyboarding

2. Handwriting Speeds - from Montgomery Schools Maryland

3. Handwriting / Keyboarding Rates - from the National Assistive Technology Research Institute

Adaptive Physical Education?

School based therapists are frequently involved in providing intervention techniques and environmental modifications during physical education class. Whether it be pre-teaching skills, practicing motor skills or modifying the environment, here are two documents that are very helpful in deciding whether adaptive physical education is warranted.

1. Observation and Referral Form for Adaptive Physical Education - this is a great rubric to use to refer a student for adaptive physical education but also to use for a clear picture of how a child is participating during physical education class

2. Creating Quality, Inclusive Physical Education & Physical Activity for all Students This is a nice article on the law, suggested activities and modifications.

Funding for Adaptive Equipment

If you are looking for a nice overview on funding adaptive mobility equipment for children, Rifton has an easy to follow article. The article includes funding sources, the funding process and a visual flow chart with step by step directions. Worth a look - download it here.

Inclusive Art Activity

Came across this inclusive, creative art idea - painting with hats. A preschool teacher taped paintbrushes to the tops of hats for the children to paint with on easels. It makes an interesting disability awareness activity as well. Since some children access computers using a pointer on a hat, why not let the children see how difficult it can be to paint let alone use a computer or speech device. Check out all the photos at this blog - Play Based Classroom.

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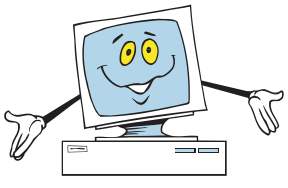

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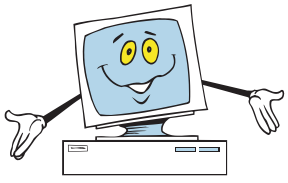

Free Activity Ideas from Your Therapy Source

Go to www.YourTherapySource.com/visuald for the complete download

Mystery Words #4

Directions: Cross out any letters that are repeated more than once. When done, write any letters that are left in the spaces below to find out the mystery word.

N	P	L	R	F	B
A	V	G	N	F	G
M	F	N	B	Y	O
V	U	G	T	V	S
R	H	B	H	F	M
G	I	N	V	R	B
D	H	R	E	H	M

Mystery Words: ___ ___ ___ ___

___ ___ ___ ___ ___ ___ ___

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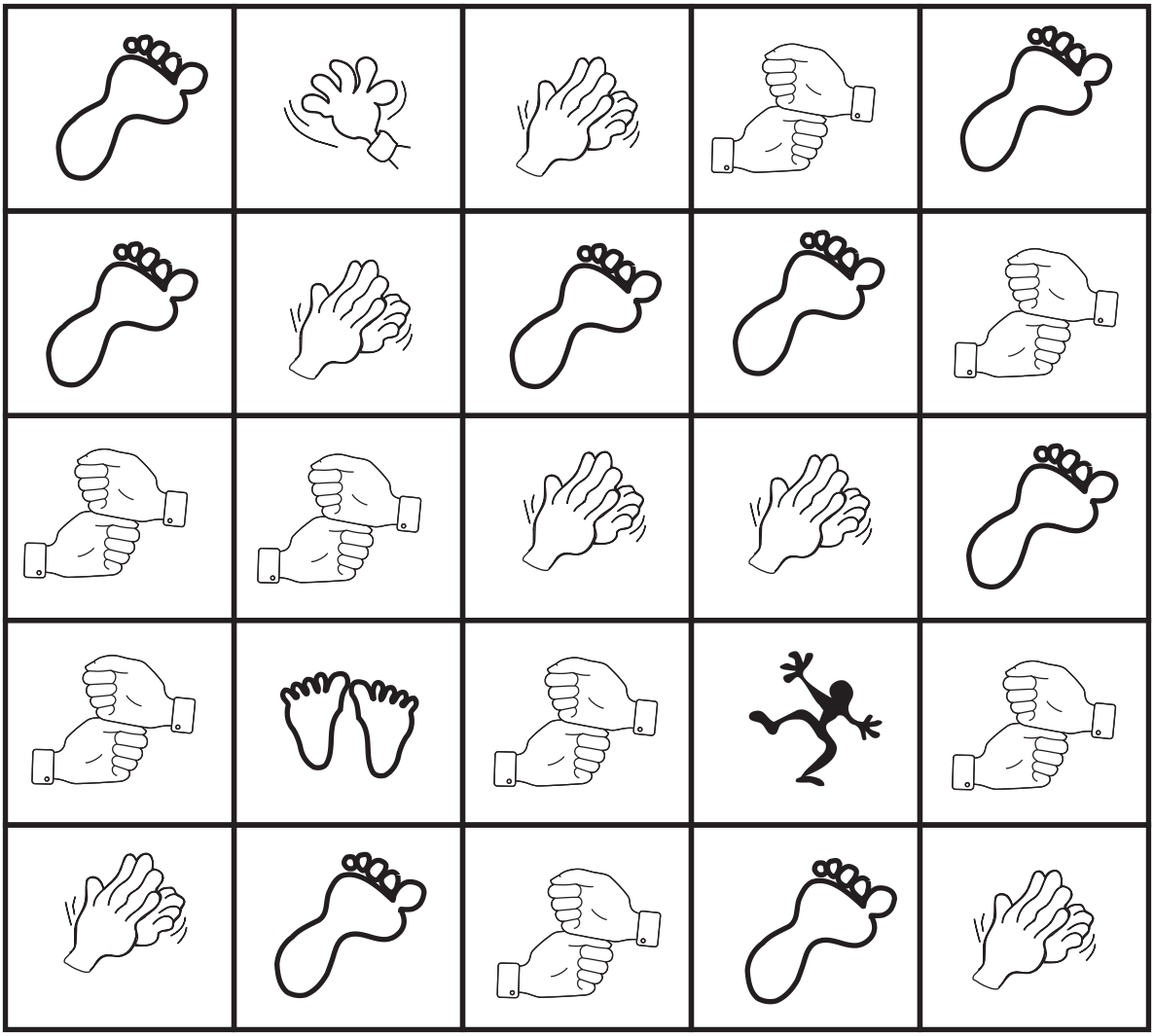
Mystery Dance #1

Directions: Cross out any pictures that are the same. When done, use the code below to perform the mystery dance.



Code:

clap	wiggle toes
wave	stomp feet
fists	shake body

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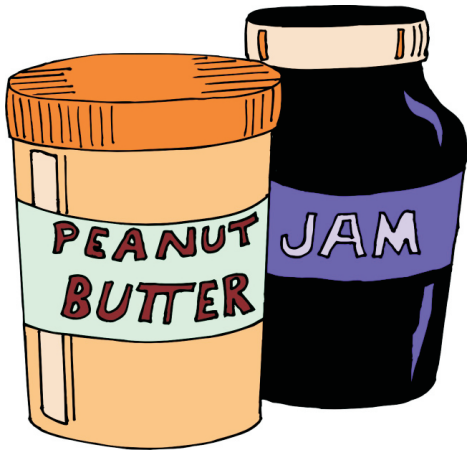
Peanut Butter and Jelly

A variation of this game was played at the local school:



Purpose: Encourage eye hand coordination, motor timing and motor planning.

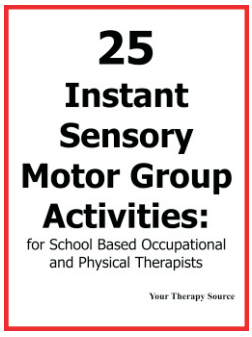
Materials: Two different colored balls

Activity: Have the children sit on the floor in a large circle. Choose one ball to be the peanut butter and the other ball will be the jelly. The object of the game is to always throw the peanut butter ball and roll the jelly ball. On start, the child holding the peanut butter ball throws it to anyone in the circle and the child holding the jelly ball rolls it to anyone in the circle. Whoever receives the peanut butter ball must continue to throw it to someone else whereas the jelly ball must be rolled. If a player makes a mistake and rolls the peanut butter ball, throws the jelly ball or if both balls (peanut butter and jelly) are in front of one player at the same time, then that player it either out of the game or play starts over (which ever you prefer).

Make sure the children keep quiet and calm during the game since it does take some concentration.

Want to make it harder? Add another ball - maybe a "bread" ball. The children must pass the bread ball to the right only. Add a "fluff" ball and you can only pass that ball to the left. Change the skills assigned to the ball - switch peanut butter to roll and jelly to throw. It gets confusing quickly! Try standing up and playing to vary the motor skills - you will have to squat down to roll the ball. Add kicking the ball instead of throwing.

Want to make it easier? Start very slowly. Start out by only practicing throwing the peanut butter ball. Stop using that ball and practice rolling the jelly ball. Add both balls when ready but do not have any competition involved.



25 Instant Sensory Motor Group Activities

Download of an electronic book of
25 sensory motor activities for group
therapy sessions

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Movement Spelling

Purpose: Encourage physical activity, proprioceptive input and practice spelling words

Materials: index cards

Preparation: You will need to create letter cards using the index cards. You could use the spelling word list for the week or create your own list. For our example we will use animals to spell out. Here is the list - bears, snakes, horse, hen and frog. Write one of each letter onto the index cards - i.e. b, e, a, r, s. If you have more than 5 children playing just create duplicate letters until you equal the number of children playing. Repeat for each of the words a separate collections of letter cards.

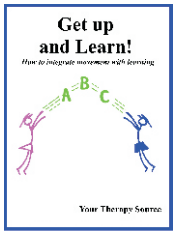
Activity: Hand out the first set of letter cards. For this example we will use bears. When each child gets a letter the leader can announce the mystery word. Ask the children what is the first letter in bears? All the children with the 'B' cards should move like a bear to the front of the room. Ask "what is the next letter in bears" Then all the children with 'E' cards should move like a bear to the front of the room. Continue until the word is spelled. Have the children move like bears for a bit and then hand out a new set of cards.

If you are doing a spelling list, you could set the movement for each word. For example, the word is "sunshine". Hand out the cards and have the children move to the front of the room with their letter cards by jumping forward each time. Changes the movement for the next word.

Try the game outdoors to practice running and get in some vigorous physical activity time.

Want to make it harder? Hand out the set of cards for one word and give extra children all the same letter (that is not in the spelling word). For example if you have 20 children in the class and the word is "sunshine" hand out each letter in the word (8 cards) plus 12 cards all with the letter 'D' on it. Now the children have to move around the room with what ever locomotor action you call out to unscramble the spelling word. All the children with more than one matching letter should exclude themselves from being in the spelling word.

Want to make it easier? Write the spelling word on the board to provide a visual cue to match the letters on the board to the index card. If the children are non-ambulatory, when the child's letter is called, try movement actions such as raising your right arm, waving your left hand, nodding your head, hitting a switch, etc.



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