

New Products



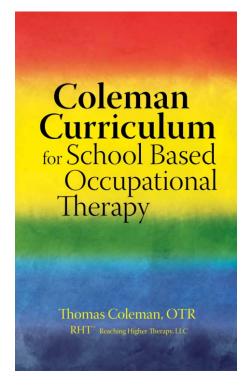
Title: Spring Multisensory Handwriting Activities

Summary: Download of Spring multisensory handwriting worksheets that include movement, scissor skills, gluing, "rainbow" writing and handwriting practice. Also includes a scoring rubric to track progress.

List Price: \$4.50

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www.YourTherapySource.com/msspring



Title: Coleman Curriculum for School Based

Occupational Therapy

By: Thomas Coleman, OTR

Summary: This electronic document is a curriculum for occupational therapy in the schools from Kindergarten through Third Grade. Skills are discussed, examined and explained for everyone to understand.

List Price: \$19.95

www.YourTherapySource.com/coleman

5 Steps to Promote Participation of Children with Disabilities



This week on the blog the focus will be on exercise participation and children with disabilities. The recommended amount of physical activity daily for children is at least 60 minutes per day. This can be difficult to accomplish for any children with the busy schedules that face this young generation today. For children with disabilities, this can be very difficult to achieve each day for various reasons. Pediatric occupational and physical therapists can help parents, teachers and other members of the community how to promote participation in sports, recreation and physical activities.

- 1. Educate on the benefits of sports participation and recreation: Regular physical activity helps the body by maintaining muscle strength and range of motion, increasing bone mass, and improving cardiovascular fitness. The brain also benefits from physical activity through elevating the mood, improving self concept, enhancing social skills and more. Specifically sports participation can create friendships, encourage creativity, foster teamwork and define meaning for one's life.
- 2. Choose appropriate activities: A child's disability or diagnosis needs to be taken into consideration when deciding upon an appropriate recreational or sporting activity. The American Academy of Pediatrics has produced various charts in the article Medical Conditions Affecting Sports Participation to help guide the decision making process. In general, it is recommended that children with disabilities participate in increased duration (minutes per session), frequency (times per week) and decreased intensity if comparing to typically developing children.
- 3. Minimize risk of injury: Once a sporting activity is chosen, modify the activities if necessary to ensure the safety of the child.
- 4. Adapt the activity: Offer suggestions to adapt the sporting activities so that the child can participate the most.
- 5. Have a positive, supportive attitude: Unfortunately, society tends to view children with disabilities too susceptible to injury to participate in traditional sporting activities. Families and the environment seems to influence participation more than the child's choices. Remember the children have a right to participate!

Reference: Murphy, Nancy A., Carbone, Paul S., and the Council on Children With Disabilities, Promoting the Participation of Children With Disabilities in Sports, Recreation, and Physical Activities Pediatrics 2008 121: 1057-1061

Exercise Participation: JIA



Exercise
Participation:
Juvenile Idiopathic
Arthritis

Here are some specific recommendations for exercise and children with juvenile idiopathic arthritis (JIA). Research has shown that children with JIA can participate in exercise regimens without exacerbating the disease. In addition, research has shown that exercise for at least 6 weeks decreases disease activity, improves quality of life and decreases pain. In general, it is recommended that children with JIA participate in moderate fitness and strengthening activities.

There are precautions necessary to consider when recommending exercise or sports participation for children with JIA. Depending upon where the JIA is located, various risks may be present. For example, cervical arthritis makes a child at greater risk for neck injuries and temporomandibular joint disease may result in dental injuries. JIA may results in visual impairments making a child more susceptible to eye injury. If children have been diagnosed long term with JIA, research has shown aerobic fitness to be lower than typically developing peers.

In addition to the precautions, the following recommendations should be considered when suggesting exercise programs for children with JIA:

- 1. participation in contact sports or impact activities are permitted if the disease is well managed and the child has the physical capacity to participate in the sport (cervical spine should be screened with x-ray prior to contact sports)
- 2. activities should be pain free
- 3. if the JIA flares up, return to regular activity should be gradual
- 4. jaw protection and proper eye protection should be utilized

Overall, children with JIA may benefit from moderate fitness, flexibility and strengthening activities and may participate in exercise and sports without exacerbating the JIA.

Reference: Philpott, John F MD, Dip Sport Med; Houghton, Kristin MD, Dip Sport Med; Luke, Anthony MD, MPH, Dip Sport Med Physical Activity Recommendations for Children With Specific Chronic Health Conditions: Juvenile Idiopathic Arthritis, Hemophilia, Asthma, and Cystic Fibrosis Clinical Journal of Sport Medicine: May 2010 – Volume 20 – Issue 3 – pp 167-172 doi: 10.1097/JSM.0b013e3181d2eddd

Exercise Participation for Children with CP

When recommending exercise and sports participation for children with cerebral palsy, there are many factors to consider. Research is constantly being collected and analyzed on the benefits of physical activity for people with cerebral palsy. One topic is the use of muscle strengthening exercises. Some current research states that progressive resistance exercises has been shown to improve muscle strength and function. Some research has concluded that muscle strengthening does not increase muscle spasticity.

Regarding cardiovascular health, children with cerebral palsy:

- 1. have 2-3 times higher energy expenditure rates while walking
- 2. may have poor cardiovascular health
- 3. take many less steps per day than their typically developing peers

With these statistics in mind, aerobic exercise can be beneficial for children with cerebral palsy.



Exercise Participation: Cerebral Palsy

Some examples of research studies indicating this are the following:

- 1. lower limb cycling (3x/week, 20 min sessions for 1.5 16 months) resulted in improved aerobic fitness
- 2. a community fitness program of aerobics, strength training, and stretching (3x/week for 10 weeks) resulted in increased muscle strength and improved perception of physical appearance 3. a systemic review of research indicated that short-term cardiorespiratory training (i.e. 2–4 months) increased aerobic fitness by 18–22% and long-term training (i.e. 8–9 months) by 26–41%. Short-term training (i.e. 2–4 months) increased activity by 0–13%, and long-term training (i.e. 8–9 months) by 2–9%. Aerobic activity provided little carry over into activity.

When deciding what sports or recreational activities are suitable for children with cerebral palsy, each child would have to be evaluated individually. Basically, once a child is thoroughly evaluated, a pediatric therapist can help to suggest recreational activities such as boccie ball, fishing, horseback riding and more. For formal sports such as swimming, wheelchair basketball, soccer or baseball, the therapist can help to suggest which sport would make a good fit for a particular child based on functional levels. In addition, any adaptations or modifications to the sports or recreational activity should be considered.

References:

Darrah, Johanna PhD, PT; Wessel, Jean PhD, PT; Nearingburg, Patricia PhD, PE; O'Connor, Marjorie BEd, PE Evaluation of a Community Fitness Program for Adolescents with Cerebral Palsy Pediatric Physical Therapy Spring 1999 – Volume 11 – Issue 1

Butler, Jane M.; Scianni, Aline; Ada, Louise Effect of cardiorespiratory training on aerobic fitness and carryover to activity in children with cerebral palsy: a systematic review International Journal of Rehabilitation Research:

June 2010 - Volume 33 - Issue 2 - pp 97-103 doi: 10.1097/MRR.0b013e328331c555

Exercise Participation: Children with Asthma

Asthma is a common chronic disease is the pediatric population. Having this condition, does not indicate that children should avoid exercise or sports participation. Although exercise and emotions can trigger bronchospasm with mild inflammation. Statistics show that almost 90% of asthmatics and 40% of people with allergic rhinitis suffer from exercise induced bronchospasm (EIB). This bronchocontriction typically occurs after 8-15 minutes of physical activity and clears up with 60 minutes. The usual triggers for EIB are running and other cardiovascular activities excluding swimming.

Some of the benefits of exercising for asthmatics are the following:



- 1. improves aerobic capacity (although does not change pulmonary function tests)
- 2. swimming can decrease asthma morbidity
- 3. potential for decrease in EIB severity (exercise may increase the threshold for triggering bronchospasm

There are possible risks to asthmatics with exercise such as:

- 1. high intensity exercise can trigger EIB
- 2. bronchial changes with endurance athletes
- 3. any sports or recreational activities that expose the athlete to dry, cool air, allergens or pollutants could trigger asthma (winter sports exacerbate symptoms more)
- 4. scuba diving may be dangerous

When children with asthma exercise the following tips are recommended:

- 1. asthmatic children can participate is any physical activity if symptoms are controlled. A lower risk activity to trigger symptoms is swimming.
- 2. keep a log of physical activity, triggers and symptoms
- 3. should be followed by a medical doctor to diagnosis EIB, prescribe proper medications and when to take the medications prior to exercise
- 4. avoid scuba diving if asthma symptoms are present or abnormal pulmonary function tests
- 5. for major competitions you may need documentation from physician to use certain medications.

Reference: Philpott, John F MD, Dip Sport Med; Houghton, Kristin MD, Dip Sport Med; Luke, Anthony MD, MPH, Dip Sport Med Physical Activity Recommendations for Children With Specific Chronic Health Conditions: Juvenile Idiopathic Arthritis, Hemophilia, Asthma, and Cystic Fibrosis Clinical Journal of Sport Medicine: May 2010 – Volume 20 – Issue 3 – pp 167-172 doi: 10.1097/JSM.0b013e3181d2eddd

Sprint Interval Training



Sprint Interval Training for Young Adults with Intellectual Disability

Clinical Rehabilitation published a randomized control research trial on the influence of sprint interval training on body composition, physical and metabolic fitness in adolescents and young adults with intellectual disability. The 54 participants with intellectual disabilities (average age 17 years) in the study were randomly assigned to one of three groups: sprint interval training, continuous aerobic training or control group (did not participate in any exercise). Sprint interval training consisted of three blocks of 10 minutes at ventilatory threshold (blocks 1 and 3: 10 sprint bouts of 15 seconds, followed by 45 seconds relative rest; block 2: continuous training) twice a week for 15 weeks. Continuous aerobic training consisted of three blocks of 10 minutes continuous training. Following eight weeks, intensity was increased to 110% of ventilatory threshold. Prior to the training period and after the training period, body composition, physical and metabolic fitness were evaluated.

The following results were recorded:

- sprint interval training showed a significant positive evolution for waist circumference, fat%, systolic blood pressure, lipid profile, fasting insulin, homeostasis model assessment of insulin resistance, peak VO2, peak Watt, ventilatory threshold, 6-minute walk distance and muscle fatigue resistance when compared to the control group with no training.
- sprint interval training group demonstrated significant improvements for fat%, systolic blood pressure, low-density lipoprotein, fasting insulin, peak VO2 and peak power and ventilatory threshold when compared with continuous aerobic training.

The researchers concluded that sprint interval training has stronger beneficial effects on body composition, physical fitness and metabolic fitness than no exercise or continuous aerobic training.

Reference: Pieter-Henk Boer et al. The influence of sprint interval training on body composition, physical and metabolic fitness in adolescents and young adults with intellectual disability: a randomized controlled trial Clin Rehabil March 2014 28: 221-231, first published on August 20, 2013 doi:10.1177/0269215513498609

Check out Locomotor Games at http://yourtherapysource.com/locomotor.html for activities to get kids moving!

Dual Tasks: Walking and Holding a Box Level



It can be difficult for some children to complete two tasks at one time (dual task conditions). In the school setting, the task of walking and carrying school supplies, lunch tray or textbooks is a common occurrence. Here is some recent research that was conducted to evaluate the effects of dual task constraints on walking and bimanual coordination for 10 children with unilateral cerebral palsy (CP) and 10 children without unilateral CP. The children (ages 7-11 years old) were asked to:

- stand still while holding a box level (standing condition)
- walk along a path (baseline condition)
- walk again while carrying a box steady and level (dual task condition) at a preferred speed.

The results indicated the following:

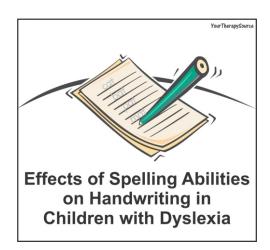
- the children with unilateral CP decreased their walking speed, stride length, step width, and toe clearance from the floor under dual task constraints when compared to the baseline condition.
- typically developing children did not change under dual task constraints.
- the children with unilateral CP also had less level box carrying, larger vertical box movement, and larger elbow movements when compared to typically developing children under dual task condition.

The researchers concluded that future treatments or assessments should consider using dual task constraints to manipulate the difficulty of tasks.

Reference: Hung YC, Meredith GS. Influence of dual task constraints on gait performance and bimanual coordination during walking in children with unilateral Cerebral Palsy. Res Dev Disabil. 2014 Feb 13. pii: S0891-4222(14)00038-9. doi: 10.1016/j.ridd.2014.01.024. [Epub ahead of print]

Get activity ideas to challenge motor planning and coordination from 50 Sensory Motor Activities for Kids! at http://yourtherapysource.com/50book.html

Effects of Spelling Abilities on Handwriting



Recent research explored the complex relationship between spelling and handwriting specifically that spelling ability influences handwriting ability. The participants (31 children with dyslexia and age matched and spelling-ability matched children) were assessed for execution speed and temporal characteristics of handwriting when completing sentence-copying tasks that were free from composing demands. In addition, the predictive value of spelling, pausing, and motor skill on handwriting production were evaluated. A digital writing tablet and Eye and Pen software were used to analyze handwriting.

The results indicated the following:

- children with dyslexia were able to execute handwriting at the same speed as the agematched peers.
- children with dyslexia wrote less overall and paused more frequently while writing, especially within words.
- combined spelling ability and within-word pausing accounted for over 76% of the variance in handwriting production of children with dyslexia, demonstrating that productivity relies on spelling capabilities
- motor skill level did not significantly predict any additional variance in handwriting production
- reading ability predicted performance of the age-matched group, and pausing predicted performance for the spelling-ability group.

The researchers concluded that there is an interactive relationship where spelling abilities can constrain the rate of handwriting production. It was recommended that more consideration be given to what common handwriting tasks are assessing as a whole.

Reference: Sumner, Emma; Connelly, Vincent; Barnett, Anna L. The Influence of Spelling Ability on Handwriting Production: Children With and Without Dyslexia. Journal of Experimental Psychology: Learning, Memory, and Cognition, Feb 17, 2014, No Pagination Specified. doi: 10.1037/a0035785

10 Research Based Intervention Tips for DCD



10 Intervention Tips for Children with DCD

Here are several, research based, helpful intervention tips to follow when working with children with developmental coordination disorder:

- 1. Encourage practice of functional tasks required in the daily routine and everyday life.
- 2. Practice multiple, short sessions versus one long session i.e. practice a skill 5 minutes per day versus 35 minutes/week.
- 3. Vary the practice sessions.
- 4. Facilitate the use of cognitive strategies. Ask the child to set goals, to self check skills and problem solve.
- 5. Break down large tasks into smaller chunks.
- 6. Use movement activities in different social settings in order for child to practice skills in a group setting.
- 7. Change the rules of games in order for the child to participate if necessary (i.e. change the size of a basketball hoop to be larger or lower down to the ground).
- 8. Differentiate the levels of activities if necessary. (i.e some students speed walk some students skip during a game of tag).
- 9. Little by little, increase the difficulty of the skills being taught. Change one aspect of the skill at a time. For example, practice kicking a large, stationary ball. Next practice kicking a smaller stationary ball. Next, kick a large, moving ball from 10 feet.
- 10. When the child begins to show progress offer praise and encouragement. Slowly reduce the amount of support you provide i.e. less verbal cues or decrease pre-teaching of skills.

Reference: UK DCD Concensus. Information for Allied Health Professionals on DCD. Retrieved from the web on 2/7/14 at http://www.movementmattersuk.org/dcd-dyspraxia-adhd-spld/developmental-disorders-documentation/information-for-allied-health-professionals.aspx.

Need more tips? Check out <u>25 Tips Sheets for School Based Therapists</u> at http://yourtherapysource.com/tipsheets.html

Need activity ideas? Check out *Play Move Develop* at http://yourtherapysource.com/playmove.html

Processing Sight and Sound in Children with Autism

Focus on Autism and Other Developmental Disabilities published research of the effects of using a platform swing on independent work behaviors in children with autism spectrum disorders (ASD). The research was a pretest – posttest randomized design with 30 children with ASD. All individuals in the study participated in 2 five minute intervals of independent work. The experimental group received vestibular stimulation via a platform swing and the control group watched a video in between the intervals of independent work.

The results indicated the following:

 no significant differences were recorded between the treatment and control groups on engagement, on-task behavior, stereotyped/repetitive behavior, or out-of-seat behavior.



Here are some additional details:

- the vestibular stimulation was slow, linear motion on a platform swing for 5 minutes per sensory break. The study does not indicate the position of the participant on the platform swing.
- for data collection there was video analysis of the child's on task behaviors coded by 4 different behaviors - on-task, engaged, stereotyped/repetitive, or out of seat.
- post hoc analysis of the sensory profiles (Dunn 1999) showed that 66% of the 15 participants were classified as seekers, 14% of those with the seeking/underresponsive pattern and three could not be classified. The participants without classifications improved. However, similar patterns were identified in the control group. Two participants were classified as overresponsive in each group the 2 children in the treatment group did not evidence improvement

Overall, the researchers stated that the clinical implications of this study indicate that "Any SI treatment should be provided cautiously, in short-term increments with individual improvements documented before continuing intervention with a given client".

Reference: Linda C. Murdock, John A. Dantzler, Anne N. Walker, and L. Becca Wood The Effect of a Platform Swing on the Independent Work Behaviors of Children With Autism Spectrum Disorders Focus on Autism and Other Developmental Disabilities March 2014 29: 50-61, first published on November 12, 2013 doi:10.1177/1088357613509838

The Scale of Sensory Strategies (S.O.S.S.) Tool Kit™ provides an evidence-based plan of care with sensory strategies that will optimize a child's behavior in the school, home and community. FIND OUT MORE at http://yourtherapysource.com/soss.html

Cut and Paste Sensory Diet - Download of the materials to create 2 sensory diet books, one for home and one for school with over 150 picture word cards. Find out more at http://yourtherapysource.com/sensorydiet.html

5 Steps to Visualize Success at Motor Goals



Do you ever use visualization techniques to help children improve their motor skills or reach their goals? Visualization is a common practice among athletes to improve their performance and take their skills to the next level. Research among adults indicates that mentally rehearsing a sport can help to improve performance, trigger responses from the autonomic nervous system and help in the construction of schema.

Here are 5 steps to carry out for visualization techniques:

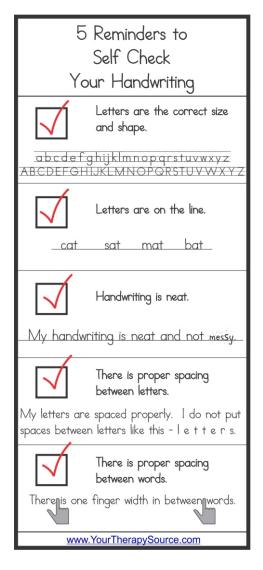
- 1. Determine what the overall goal is that the child would like to reach.
- 2. Instruct the child to relax and visualize him/herself achieving the goal.
- 3. Right before the child is going to try the skill again ask the child to visualize him/herself performing the skill perfectly.
- 4. Throughout the attempt at trying/practicing the skill have the child imagine success.
- 5. After the skill, have the child visualize the skill again. Ask the child was there anything he/she could do different the next time to improve the skill.

Reference: Saint Clair, Erica. Visualization: The Simple Tool for Even Greater Athletic Success. Retrieved from the web on 2/10/14 at http://breakingmuscle.com/sports-psychology/visualization-the-simple-tool-for-even-greater-athletic-success.

<u>Imagination Action Journeys</u> are 10 fun filled stories that encourage literacy, physical activity, imagination and creativity. Children will enjoy reading and acting out the stories. These can be completed indoors or outdoors with one child or a group of children. What a great way to promote literacy and physical activity!

Find out more at http://yourtherapysource.com/imagine.html

5 Reminders to Self Check Handwriting



Here are some free bookmarks to print and distribute to the students that you work with to remind them to self check their handwriting skills. You can download them at

http://yourtherapysource.com/freehandwritingselfcheck.html.

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Free Therapy Lesson Plan Template

Therapists can follow in the footsteps of teachers and create lesson plans for therapy sessions. This can be especially useful for group sessions or push in therapy. When the lesson plan is written, provide a copy to the teacher or parent to inform them of your goals for the session. It is a great way to establish better communication between the special education team.

Here is some information to include when creating a plan for a therapy session:

- 1. Goal: Establish the primary goal of the session.
- 2. Materials Needed: List the equipment necessary for the session.
- 3. IEP Goals Being Met: List the student's IEP goals that are being addressed.
- 4. Instruction:
 - a. Explain to the children what the goal is of the session
 - b. Write down all the steps you will take to reach the goal
- 5. Evaluate: How will you evaluate whether the goal was reached?
 - a. Formal
 - b. Informal
 - c. Rubric
 - d. Test
- 6. Closure: Wrap up the session reviewing and/or summarizing the skills that were taught.
- 7. Modifications: List any modifications that can adapt the lesson plan for each child if necessary.

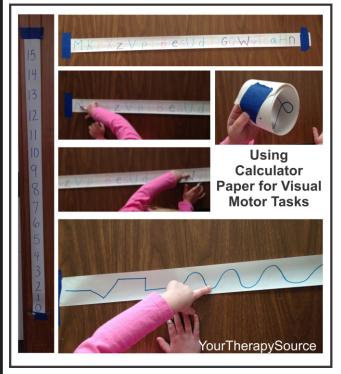
Not only will you be prepared for the therapy session, you will be prepared for documentation and planning for the next session.

Download the form at http://yourtherapysource.com/lessonplan.html to get started.





Using Calculator Paper for Visual Motor Tasks



Here are a few ideas using calculator tape to practice visual motor skills and other developmental skills. By setting up various tasks, the child will have to cross midline, use both sides of the body, visually track the letters/numbers and use visual motor skills.

Use some calculator tape to create a long line of letters, numbers or maze path. Tape the maze to the table, floor or wall. Ask the child to find letters, answer math problems or follow the path with their finger.

Some examples of what to do with calculator tape:

- 1. Find the Letter: Call out a letter and the child needs to use only the right or left hand to find and touch the letter. By encouraging the use of only one hand the child may have to cross midline to locate and touch the letter.
- 2. Number Line: Hang the numbers up on the wall. Ask the child to locate certain letters or solve math problems. The child will have to squat down or reach high to touch the correct number.
- 3. Maze Path: Draw a random path for the child to follow along the length of the paper.
- 4. Floor Path: Put the letter or number strip on the floor. The child can be placed in wheelbarrow position and have to lift one hand to touch the letter you call out.
- 5. Bilateral Path: Draw two paths on each side of the tape (the same or different). Can the child trace the paths using both hands at the same time?

Best part of it all, it is so easy to send it home with the child. When done, roll it up and give it to the child to bring home and practice the same skills.

If you do not have any calculator tape, try Visual Motor Exercises at http://yourtherapysource.com/vme.html.

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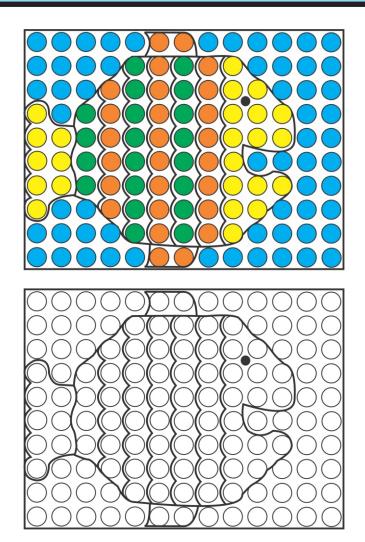
Motor Planning Video Activity idea



Here is a super simple but very challenging motor planning activity that requires no set up. Watch the video at http://yourtherapysource.com/videomotorplanningsteps

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FREE Mosaic Pattern and Activity ideas



Copy the mosaic pattern using fine motor and visual motor skills. Download a free sample page and view sample activity ideas at http://www.yourtherapysource.com/mosaic.html

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