



***Dance With Me To Develop My Mind,
Emotions and Motor Control***

Infant and Early Childhood Conference
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“...movement is crucial to every other brain function, including memory, emotion, language and learning.”

-John Ratey, *User's Guide to the Brain*

Dendrite Dance™

Adapted from Anne Gilbert's BrainDance©

Breath: Take three big breaths in a row starting each breath rolling down to the floor on the exhale and drawing your arms up over your head in the inhale. Really exaggerate the breath and make it as big as you can. Our typical breath only uses 10% of our lung capacity. It is oxygen that feeds our brain.

Touch: Give your body from your toes up to your head invigorating taps, then squeezes, then a light brush. Do three different types of touch, one for deep pressure, one for waking up, and one for light touch. Each type of tactile touch is having a different affect on the nervous system to wake it up for learning.

Upper and Lower: First work with your upper body and twist your spine, swing your arms, roll your shoulders and shake hands. Any movement that occurs above the waist and involves the upper extremities is appropriate. Stretching side to side is also good for the upper body. Next, move the lower body and march in place, swing one leg and then the other, shake a leg and then the other, try jumping up and down (two and three year olds favorite activity).

Body Side: This can be done in a number of ways. Start with opening the body up like a wide book. Then close one side of the body using the same arm and leg and open the book again into a wide stance and go to the other side. Next try to glue the same elbow to knee, making one side of your body short, meanwhile stretch the opposing side out long with the arm over head. You will be alternating sides and it looks like a Gecko climbing up a wall!

Cross-Lateral: This brings opposite sides of the body together at the same time. Take the opposing elbow to the knee and alternate sides. You will be reminded of Jane Fonda's Aerobic workout. This can also be done crossing behind you touching the opposing hand to foot.

Spin: Give yourself a big hug and gently turn around in one direction and then the other. In between your different directions press your hand down on top of your head and wait until you no longer feel dizzy.

Breath: Finish how you started and note how much freer, fuller and expanded your breathing has become. Take three large breaths from the floor to the ceiling with the arms moving with your inhale and exhale.

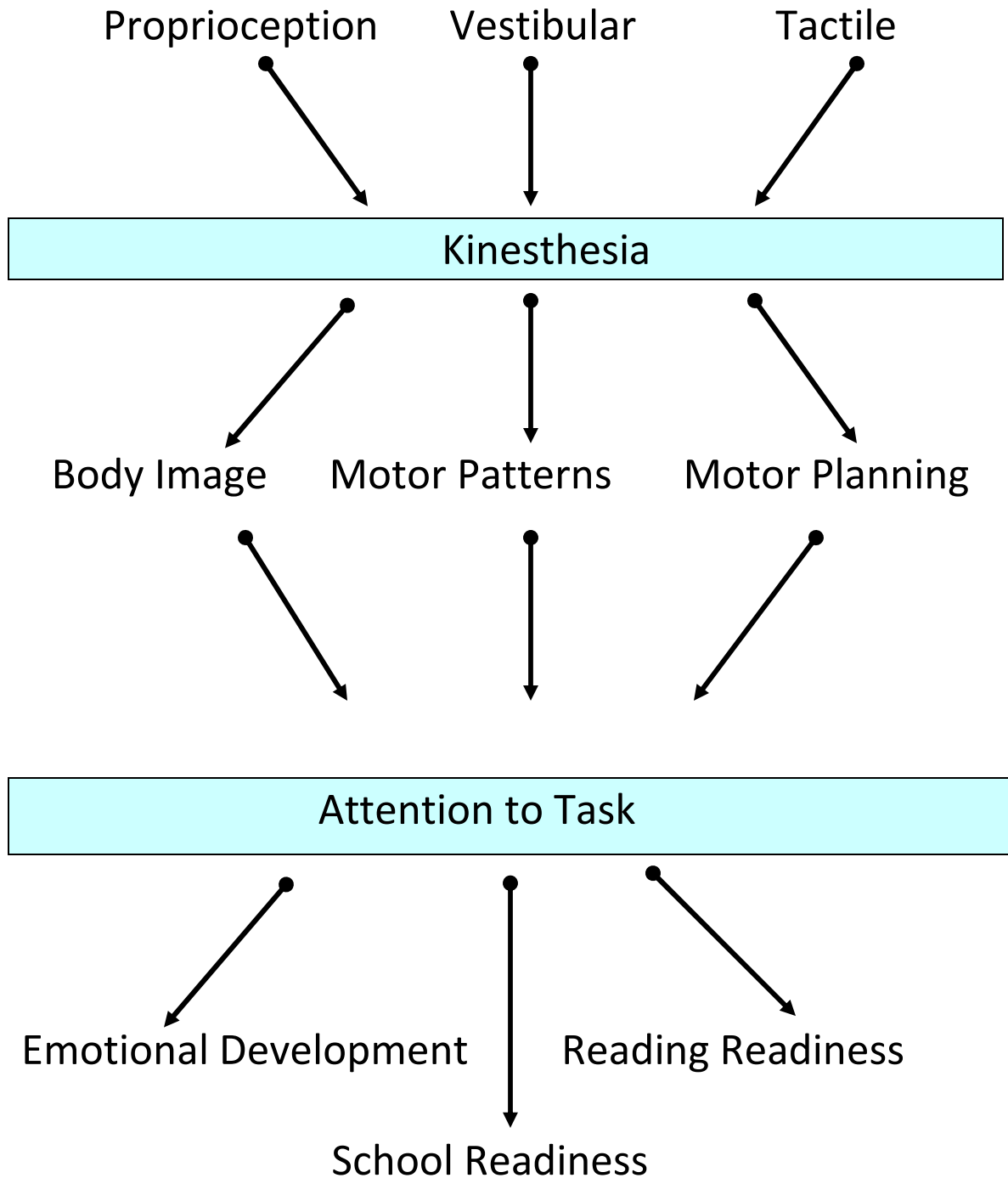
The unification of both sides of the brain enables you to relax and concentrate at the same time. In order to learn, the physical body needs to be deeply relaxed, the breath free, the emotion stable and the mind focused. People tend to learn best in a relaxed and calm atmosphere, not a regimented one, where they can hold “attention without tension.”

– Liz Lark, *Yoga For Kids*

The Brain Benefits Of The Dendrite Dance™

- ❖ Touch lets us know where our body is in space. Touch also produces Serotonin and Nerve Growth Factor, supporting well-being and physical growth.
- ❖ The balancing mechanism in our inner ear (Vestibular) needs to be stimulated for healthy Kinesthesia. There are nerves to every muscle in the body that extend from the Vestibular system, making it vital to our mental and motor planning, sensory processing, and brain maturation.
- ❖ Proprioception is the inner awareness of our joints and movements through space. It is vital for acquiring a sure sense of ourselves (body image) and how to navigate the world.
- ❖ Movement based on the three patterns infant’s progress through during the first year of life, the Basic Neurological Patterns (Bonnie Bainbridge Cohen); stimulate all of the nerve pathways in the brain, organizing the neural networks for efficient processing.
- ❖ The first two movement patterns work on the low reptilian brain and the cross lateral pattern integrates the two sides of the brain for cross communication and complex problem solving.
- ❖ The capacity to plan sequences of movement for specific tasks whether it is writing or eye movement for reading, involve using motor patterns in complex sequences. The Dendrite Dance™ develops motor planning.
- ❖ Breath provides oxygen and blood to the brain (brain food) and releases chemicals that balance behavior and calm the mind.
- ❖ Attention to Task is a complex process of filtering, attending, evaluating, and responding that involves many different parts of the brain. A well-developed “map of me” gained through motor activities is the precursor to the gateway for learning – attention.
- ❖ Developing and maintaining neural networks is not intended to occur apart from the body. **When we dance we become efficient and fulfilled movers and thinkers.**

Developing All of Me



Developing Kinesthesia: Why It Matters

Keeping in mind that development is sequential; at birth the first priority is organizing internal and external motor functions. The growth that occurs in the first year alone doubles the weight of a baby's brain from one pound to two pounds. Babies spend their first year in a sensory world that is full of touch, heavy work progressing through the motor patterns that lead to walking, and putting their internal "map of me" together exploring different body parts and how they function.

This motor-perceptual stage of development lays the foundation for organizing motor and cognitive function. In the life of a typically developing child this occurs during the first two years. This "map of me" is made up of three sensations; tactile touch, Proprioception, and Vestibular or balance. These three components make up a child's kinesthesia. When these work smoothly together they develop a body image, motor patterns, and coordinated motor planning. Healthy kinesthesia **automats our movement** so we can progress in our learning skills. It is this early foundation of movement capacities that sets the child up for attending to tasks that develop social skills, and reading and school readiness. A compromise in any one of these areas puts stress on a child's learning/attentional system and interferes with the ease of learning.

The purpose of creative dance is to mature kinesthesia, make motor patterns and planning automatic so the brain is free to attend to higher and higher levels of learning, all in the context of having fun and developing social skills in a group environment.

"Physical movement, from earliest infancy and throughout our lives, plays an important role in the creation of nerve cells networks which are actually the essence of learning."

-Carla Hannaford, *Smart Moves*

"...the foundation for a lifetime of physical activity begins in childhood."

-National Association for Sports and Physical Education, *Active Start*

Non-Mobile Lesson Plan

Created by Christine Roberts

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Rhyming Exercises

1. I've Been Working On The Railroad (Low Brain)

Apply deep pressure with finger tips and hands starting at the top of the spine and moving down to the hips and legs, on the right side and then the left while the child is relaxing on their tummy.

2. Jack n' Jill (Low Brain)

Make a ball and then roll the child onto their tummy and into a flying fish.

3. Way Up High In the Apple Tree (Mid Brain)

Reach alternating arms up high and make a round shape in front touching fingers and toes together. Gently shake all the body parts at once and roll onto your back and put your feet up in the air.

4. Pussy Cat (High Brain)

Start with knee and elbow touching body side for the first two verses and then take the hands to the feet in a body cross pattern for the last two verses.

5. Wheels On The Bus (High Brain)

Ball ride:

Wheels: circle around on the ball

Wipers: move side to side

Windows: move forward and back on the ball

Instruments (Whole Brain)

Down In The Valley #1 *Down In The Valley* for rhythm

Music for Creative Dance Vol. III #2 *Rock n' Stop* for eye-tracking

Music for Creative Dance Vol. III #9 *Tempo Tantrum* for body percussion

Tap rhythms on child's sternum, shoulders and hips.

Waltz Exploration (Bonding, Attachment)

Move slowly around the room changing the position of the child and if there is a mirror visit the mirror and let them say hello.

Music: Chimes of Dunkirk #14 *Waltz*

Cool Down (Recuperate, Integrate)

Lycra swing or a massage routine

Music: I Am the Song #13 *Walking Now In Beauty*

Benefits Of The Non-Mobile Lesson Plan

The Rhyming Exercises

I've Been Working on the Railroad is where we start using deep pressure to provide an inner sense of muscles, tendons and joints. Deep pressure wakes up the parts related to the whole and the body's position in space. *Jack n' Jill* goes straight to the brain stem and works to calm and improve the attentional system in the brain or RAS. *Way Up High In The Apple Tree* supports the sitting position for postural control and works on the mid-brain while integrating the child's upper with their lower. *Pussy Cat* moves the child into their thinking brain because it is working on the complex patterns of movement that involve body side and body cross. *Wheels on the Bus* develop the child's postural support and the process refines "the map of me" in their brain.

Musical Instruments

The musical instruments are a gateway to their heart. What children love they repeat and rehearse. Here is a list of benefits from the different components of music:

- ❖ Beat provides input to the motor center.
- ❖ Tempo affects the RAS or stress-alertness center.
- ❖ Harmony triggers the emotional, memory and self-regulatory centers of the brain.
- ❖ Quality of sounds or timbre (percussive versus lyrical) affects the cognitive and memory centers.
- ❖ Instruments affect the pleasure centers as well as tactile, vestibular and auditory receptors.
- ❖ Lyrics are effective tools for developing cognition; patterns, parts to the whole and sequencing.

Waltz Exploration

The social dance moves the child up into a higher level in the brain incorporating the limbic or social brain. As the child is moved through space they relate to the other dancers, engage in eye contact, verbal interactions and gestures developing their bonding brain.

Cool Down

Touch through massage or swinging and swaying in the Lycra brings the child into a quiet and alert state optimizing their ability to learn. Children release essential hormones during massage such as Serotonin, a natural anti-depressant and immune system booster as well as NGF (Nerve Growth Factor), the "Miracle Grow" for their bodies and brain. The cool down also helps with self-regulation and the modulation of stability with mobility. It is in the quiet alert state that they come to understand the meaning of enjoying their bodies and brains free of stress.

Mobile Lesson Plan

Created by Christine Roberts

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Rhyming Exercises (Low Brain)

1. Old MacDonald Had A Body

Sing the song interchanging different types of pressure, squeeze, tap, brush, tickle, during what would be the animal sounds.

2. Jack n' Jill (Low Brain)

Cocoon with arms hugged around the shoulders and the head curled up to the knees. On "Jack fell down", roll to your tummy and make a flying fish with arms and legs off the floor. "And Jill came tumbling after" pull back into child's pose. Repeat the rhyme.

3. Row Your Boat (Mid Brain)

With a rubber band between two children pull and row back and forth working with the rhythm of the song.

Transition to the spots along the side of the room:

Perform the belly crawl. Work with the children to engage an alternating body side pattern that starts with a **push from the lower**.

Exploration (Mid Brain)

With scarf in hand, follow the chosen leader. When the music pauses the teacher will call the name of another student to lead. Introduce and work with a dance concept such as directions and levels and then call out leaders and they can incorporate the concept into their dance.

Music: Music for Creative Dance Vol. III #2 *Rock n' Stop*

Obstacle Course (High Brain)

Set up a rectangle so there is continuous flow around the course. Emphasize motor movements that require balance. Set out balancing buckets, cones, spots, large ball with a tossing activity. Model doing the course first and then have them move through it. **Music:** Music for Creative Dance Vol. III #6 *Fiesta*

Bean Bag Ditty (Thinking, Integrate)

Sitting across from one another or on balls for an added postural challenge, sing *Row Your Boat* and pass the bean bag around to your partner hand over hand. Reverse and go the other way.

Cool Down (Recuperate, Integrate)

Parachute Breath. With the children placed around the outside of the parachute holding the handles lift the parachute up and down and with each billow breathe with the parachute. Once they have established a big breath have them go under the parachute and assume a comfortable resting position. Adults breathe the parachute up and down SLOWLY to finish.

Music: Music for Creative Dance Vol. III #5 *Breath*.

Benefits of The Mobile Lesson Plan

The Rhyming Exercises

Using deep pressure during the rhymes provides an inner sense of muscles, tendons and joints. Deep pressure wakes up the parts related to the whole and the body's position in space. Jack n" Jill goes straight to the brain stem and works to calm and improve the attentional system in the brain or RAS. Row Row alerts the tactile and functional use of the hands and pulling or pushing (strength building activities) work the low brain responsible for sensation and quieting the mind to focus.

The transitional belly crawl combines Vestibular, Proprioception and touch into one very profound movement pattern that strengthens the child's overall kinesthesia.

"Learning this simple coordinated pattern is an excellent way for persons of any age to enhance kinesthesia and to improve stability, coordination and learning."-

Margot Heiniger, *Kids Learn From The Inside Out*

Exploration

This opens the child who is following up to a whole new repertoire of movement that is unique to the leader. By participating in another's person's movement we move out of our patterns and expand our expression. I recommend bunching, scrunching, tossing and catching the scarf in self-space to strengthen hand function and eye-hand coordination during the exploration as well. All of these activities build a child's body image.

Obstacle Course

The obstacle course, like music has a laundry list of benefits.

- ❖ Working on the ball establishes the body's stable frame of reference in the upright position which is to say it improves posture. This is our starting point for our orientation in space.
- ❖ Sequencing from one motor skill to the next develops the automatic motor planning capacities carried out by the cerebellum.
- ❖ The Vestibular system helps us organize sensory messages coming in with motor messages going out. Balancing shapes, buckets, hopping and jumping skills place a demand on the system and strengthens the child's "map of me" or body image. It is difficult to differentiate body parts into movement patterns if one's kinesthesia is weak.

"We cannot conceive consciousness without fixing the position of our body in relation to the outside world. More precisely, we cannot appreciate any sensory experience, emotion or feeling without presenting ourselves to the vertical."

-M. Feldenkrais. *Body and Mature Behavior*

Bean Bag Ditty

The bean bag song culminates all the focus we have garnered and postural support to engage in a bi-lateral hand- eye coordination activity. A feeling of accomplishment accompanies this final activity and the children feel good about mastering it. Different tempos can be introduced to make it challenging and exciting.

Cool Down

The parachute and breath adds flow to their actions- the space between movements. And of course breath and rest are powerful for reducing stress and integrating and consolidating learning.

In Conclusion

Every component of the plan strengthens the motor-perceptual stage in a child's life. When we strengthen children's kinesthesia with deep pressure, touch and vestibular movement, body image and thinking skills develop easily. Our goal is their engagement, joy and full agreement to participate. Our hidden agenda is to strengthen the roots of kinesthesia and motor sequencing so cognitive skills can blossom free of stress!

SUMMARY OF BENEFITS

Prevention of Sensory Issues

- ❖ Tummy time
- ❖ Vestibular Activities
- ❖ Sensory Play
- ❖ Organizing neural networks through gross motor movement patterns

Bonding and Attachment:

- ❖ Teaching play skills to parents with babies and toddlers
- ❖ Teaching feedback, how important it is
- ❖ Showing parents that boundaries are beneficial
- ❖ Empowering parents to enjoy their special needs child
- ❖ Eye contact, touching, singing and learning to respond to their child while they may still be grieving

School Readiness

- ❖ Learning to wait for what you want (obstacle course)
- ❖ Developing postural support for attention and focus
- ❖ Kinesthetic awareness of the shapes of the alphabet
- ❖ Stabilizing the upper body with weight bearing exercises to develop fine motor skills for cutting and writing
- ❖ Integrating left and right hemispheres to develop creative thinking skills

Glossary Of Terms

ANS: Autonomic Nervous System is the part of our nervous system that functions with out our conscious involvement. Functions related to our survival located in the brain stem and Pons.

Cerebellum: Located in the back of the brain it is the spatial memory map and responsible for our automatic motor movements that we don't have to give a lot of conscious thought to.

Kinesthesia: The body's sense of itself from the inside out.

Limbic: The social emotional brain located in the midbrain.

Schema or Movement Patterns: The basic neurological patterns (Bonnie Bainbridge Cohen) and the ability to integrate them into complex sequences of movement.

Motor Planning or Praxia: The body's ability to break down a task and move smoothly through all the steps.

Proprioception: Knowing where your body is in space in relationship to others and objects due to an inner awareness of one's joints, muscles and tendons.

Tactile: Touch sensations give us messages about our body position, activity and stability. Touch creates the framework for body image, movement patterns and motor planning.

Vestibular: Position and movement of the head in relation to gravity maintains posture and balance.

Resources For Materials

**Nurturing Pathways, Inc, 425 280-3805
www.nurturingpathways.com
info@nurturingpathways.com**

- ❖ Streamers
- ❖ Scarves
- ❖ Musical Instruments
- ❖ Lycra Swings
- ❖ Music CD's
- ❖ Parent Packs™

**Costume Display and Supply in Seattle, 888 562-4810
11201 Roosevelt Way NE, Seattle, WA 98125**

- ❖ Spots

Abilitations Catalogue, 800 850-8602

- ❖ Dizzy Disc
- ❖ Balancing Buckets
- ❖ Scooters
- ❖ Balls
- ❖ Parachutes
- ❖ Stepping Stones

**Join Christine June 26th, 2010 in Seattle at her Digging Deeper
Workshop from 10AM to 3:30PM and learn more, play more, and
dance more for the health and well-being of the children you serve!**

**Information and Registration at:
www.nurturingpathways.com**

Resources For Nurturing Pathways®

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