University of California Cooperative Extension



An Early Literacy and School Readiness Newsletter for Professionals

Brain Dance: What Do We Know About Dance, Movement, & Learning?

Dance and movement help children experience their world

Research tells us that from birth to age six, there is a lot of important learning happening. Neural connections are being made at a fast rate during the early years. During this early learning period, children show us many ways that they naturally and competently explore their world and approach learning. They hear, taste, see, move, and feel their world. As Einstein shared, "Learning is Experience." Early educators need to pay attention to these natural learning experiences.



One important way children explore and learn about their world is through physical movement. Movement is a way for children to express themselves, particularly if they have not yet developed verbal language. As educators, we need to not only support movement as a learning tool, but embrace it. This may mean letting go of some old ideas, such as the idea that sitting still all the time is a good way to learn.

As Janet Eilber, artistic director of the Martha Graham Center of Contemporary Dance and advisor for Arts Education in the News, states, "Early learning is all experiential. It's physical, aural, visual and tactile – quite the opposite of sitting still and being quiet. One wouldn't teach a baby to crawl by holding him gently and carefully explaining how the

body's motor mechanisms work."

Eilber also states. "Infants and toddlers experiment with balance, locomotion and spatial relationships. They identify, imitate and communicate using sound and gesture. They respond to visual stimuli and clues. In this way, we all start out as fledgling dancers, actors, musicians and artists. We learn to move through and communicate with the world by using the basic elements of creativity: curiosity, observation, experimentation, translation. communication. No wonder 'sitting still and being quiet' is so difficult and discouraging for many young learners. We are being asked to abandon approaches to learning with which we have had great success."

Brain dance: Clues that learning is supported by (Continued on page 2) July / August 2009

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Brain Dance continued

movement, exercise, and dance

There is growing evidence that exercise benefits cognitive functions. Exercise increases blood flow to the brain, which is shown to help with memory and concentration. Physical activity is said to help get rid of pent-up energy, allowing children to focus better. Children love activities that involve the senses and movement. Therefore, children are more attentive, which may heighten the learning experience at hand. And physical activity simply makes children feel good. Feeling good helps children not only with learning, but with self-confidence and an overall positive outlook.

A 2008 Dana Consortium

Report, "Learning, Arts, and the Brain," compiled the work of cognitive neuroscientists from seven leading universities across the United States. In the study, released in March 2008, researchers explore the question of why arts training has been associated with higher academic performance: Does early arts training-to study and perform music, dance, drama--cause

changes in the brain that enhance other cognitive learning? The following



findings that hint at the relationships between arts and learning:

• An interest in a performing art leads to a high state of motivation that produces the sustained attention necessary to improve performance and the training of

attention that leads to improvement in other domains of cognition.

Correlations exist between high levels of music training and the ability to manipulate information in

both working and long-term memory; these links extend beyond the domain of music training.

- Learning to dance by effective observation is closely related to learning by physical practice, both in the level of achievement and also the neural substrates that support the organization of complex actions. Effective observational learning may transfer to other cognitive skills.
- * The full report, Learning, Arts, and the Brain, can be downloaded at www.dana.org.

Studies suggest that not only is dancing an artistic and athletic experience, but a learning experience as well. There is suggestion that early exposure to dance may enhance the link between observing and physical learning. In order to dance and move, our bodies and our brains must engage the muscles and the actions themselves. Observation of

dance and its characteristic can be thought of as mental rehearsal. Dance can combine learning methods such as learning by observing and learning by doing,

> which leads some to believe exposure to dance enhances cognitive learning. Dance helps develop attention skills and strategies for memory retrieval that also may apply to

other areas of learning.

Where's your sense of space?

In the dance world, the term proprioception is well known. According to some neuroscientists and developmental specialists, proprioception is extremely important to children, too. Proprioception can be described as feeling what you're doing, awareness of the space around you, the sense of where one's body parts are situated in space, balance, and joint, tendon, and muscle position. In dance, proprioception is important because it makes coordinated movement in space possible. For children, proprioception is said to enhance awareness of their bodies in the space around them, and pay attention.

To have an awareness of the space around you requires that you first have self awareness. The discovery of self awareness is strongly

(Continued on page 3)

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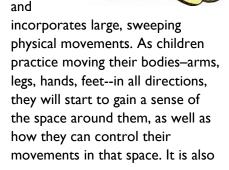
Brain Dance continued

connected to self regulation, the ability to gain control of the body, ability to manage emotions, pay attention, and ability to control impulses. The stages of infancy through early childhood have proven to be critical in developing self regulation. Although most children acquire self regulation through positive early experiences, experts suggest that self regulation is a skill that needs guidance or to be taught.

Infants begin to learn about self awareness when their needs are met. Young children are learning about self awareness when they start to learn about controlling their body. Older children learn more about self awareness by interacting with and watching the actions of others.

Dance techniques help children become aware of their physical presence, spatial relationships, self control, balance, intention,

breathing, and pattern. Dancing moves your body up, down, backwards, and forwards



suggested that understanding orientation of the body helps children identify orientation of symbols, such as letters and shapes.

We know that movement, dance, and exercise is important to children

Support children's complex developmental skills by rethinking your day's activities to include more plans for dance, movement, and exercise, such as the following:

• Use dance and movement for transition times

Dance like a ballerina to the bathroom, dance like slithering snakes to the coat cubby, etc.

Use movements to tell a story

When telling stories, use physical actions and encourage the children to act out the story with you.

Provide meaningful chores for children that include dancelike movements -

Sweep the floor, take out the garbage, weed the gardens, and of course, clean up the toys.

Dance with only one part of your body

Try dancing with only your hands, arms, fingers, or head.

• Dance with multiple materials

Dance with balls. Use balls made of many different sensory materials (soft, rough, textured, etc.). Dance with brooms, stuffed animals, scarves, and baskets. Also try dancing with things children can push and move, like wheelbarrows and baby strollers. Have children stuff pillowcases with towels and use these to move and dance with.

Dance like me, dance like you

Play "follow the leader" type dance activities, where children take turns showing their dance move for others to try. Also try adding simple patterns and steps for children to try.

Swing and swim

Use cross-lateral movements, where the opposite arm moves at the same time as the opposite leg. Encourage children to walk as they swing their arms, and pretend to play baseball and tennis. Pretend to be swimming and do the different strokes.

With infants

Dance cheek to cheek and describe the movements — "I'm lifting you up and turning around."

Also provide time on the tummy.



Sound out the dance

Move with things that make sound, such as Velcro bands of bells attached to wrists and ankles (uses multi-sensory actions) or shaker-type instruments. Try taping flat, metal lids (recycled from juice cans, etc.) to the bottom of shoes for fun tap dance sounds.

Dance and draw

Dance and draw shapes by using your body parts to be the pencil or use streamers to make shapes and letters. Also show drawings and pictures of shapes for children to look at first and then make with their bodies.

Credit: Penn State Better Kid Care Program, author Christine Belinda, www.betterkidcare.psu.edu. March'09

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Books We Love to Read!

OUTDOORS

Featured Title:

Fiona Loves the Night Patricia MacLachlan

Bubble and Pearl head off with sleeping bags for an overnight in their tent. There's a bit of worry about the dark, some strange noises, and encounters with animals. However, these animals are domestic, not wild, and they prefer joining the children to staying outdoors. The tent and sleeping bags expand to for sharing with mice, rabbits, a cat, sheep, a dog, and even a horse.

Good Night, Animals Lena Arro

Keeping Up With Grandma John Winch

Piggy and Dad Go Fishing
David Martin

Where the Big Fish Are Jonathan London

Sally Goes to the Mountains Stephen Huneck

The Little Fish That Got Away
Bernadine Cook

Monk Camps Out Emily Arnold McCully

Sheep Take a Hike Nancy Shaw

Two Dogs Go Swimming

Lynn Reiser

Froggy Learns to Swim
Jonathan London

Splish! Splash! Jill Jarnow

HORSES

Featured Title:

Anna's Prince Krista Ruepp

At four years old, Anna's horse, Prince, is finally old enough to ride, though still untrained. With help from her father and Sean, a boy from a neighboring farm, Anna gradually accustoms Prince to the bit, the bridle, the saddle, and the weight and presence of a rider on his back.

Chico

Sandra Day O'Connor

Same Old Horse Stuart Murphy

Scamper and the Horse Show Jessie Haas

Chestnut
Constance W. McGeorge

When Wishes Were Horses Sharon Hart Addy

> Appaloosa Zebra lessie Haas

Giddy-Up! Let's Ride! Flora McDonnell

The Thunderherd Kathi Appelt

Once We Had a Horse
Glen Rounds

John and Tom Willem Lang

Twist and Ernest Laura Barnes

Horses Laura Driscoll

RHYMING

Featured Title:

Down by the Cool of the Pool
Tony Mitton

There's flipping and flopping, splishing and splashing down by the cool of the pool. Frog, Duck, Horse, and Pig dance and sing their way through this wacky story with rhyming text and vibrant illustrations.

Me and My Mom! Alison Ritchie

> Jamberry Bruce Degen

Baby Bear, Baby Bear What Do You See? Bill Martin Ir.

> My Pup Margaret O'Hair

Bow Wow Meow Meow Douglas Florian

A Dog Needs A Bone Audrey Wood

Is Your Mama a Llama? Deborah Guarino

Cars: Rushing, Honking, Zooming
Patricia Hubbell

Won't You Be My Hugaroo? Joanne Ryder

I Dreamt I Was a Dinosaur Stella Blackstone

> I've Got An Elephant Anne Ginkel

> > Beetle Bop
> > Denise Fleming

Zoom! Diane Adams

Page 4 Ready to Succeed

It's Newsletter Evaluation Time!

To prepare our year-end required reports for First 5 Placer County, it's time for our annual evaluation. Our goal is to make our newsletter educational and informative. Your opinions are important to us, so we appreciate your time. Please mail or fax your completed survey to the UCCE office or submit your answers online by visiting the **Ready to Succeed** web pages (http://ceplacer.ucdavis.edu) by **July 27, 2009**. If you are a **MAIL** subscriber submitting online, include your 3 digit code from your mailing address label. If you are an **ONLINE** subscriber, include your mailing address with zip code. We appreciate your ongoing support of our program!

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Newsletter Evaluation continued

10.	Briefly describe any way the information in the newsletter has caused you to enhance or modify your teaching or early literacy practices?
11.	What changes or additions would you suggest for the newsletter:
12.	Additional Comments:

Thank you for once again taking the time to complete our survey! Your responses help us evaluate the information we provide and prepare the reports required for First 5 Placer County. Please return this in the addressed envelope provided, fax it in, or go online to submit your responses. **Deadline: July 27, 2009**

Sharon K. Junge

Paula R. Westeren

Nutrition, Family, & Consumer Sciences Advisor

Program Representative II

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