

# Moving to Learn

The connection between the body and the brain



**Playing is Learning!**

I've learned through my studies and experiences that young children need to, want to, and are innately programmed to move and play. We as educators, need to recognize this and provide an appropriate environment that promotes and encourages physical activity for all children...not just the child that is genetically talented or happens to be an early maturer. Those children always seem to be the first chosen or the first to cross the finish line. I am your classic PE dropout. I grew up the fat little girl (a 'late bloomer' too) who was never asked to join in, or was given little to do in the game, and never had the confidence to ask, 'Can I play too?' My memories of gym stir up feelings of inadequacy, humiliation, and just pure dislike. Many children today are acquiring attitudes about physical education much the same way I did. Teachers have the responsibility to give all children developmentally appropriate movement activities, which will increase their self-confidence and promote a positive self-esteem. We need all-inclusive type of activities where everybody participates and wins. The movement activities I integrated into my early childhood program begin to introduce children to different ways of using their bodies. Through movement and play children actually prepare their brains for learning. Children grow into their brains. Research conclusively indicates that when children are engaged in physical activities, the cognitive domains of the brain are naturally stimulated. It is the BODY that teaches the brain and not vice versa.

Let's look at some of the physiological reasons behind the idea of developmentally appropriate movement activities. Children learn from their brain stems up. The brain stem is about the size of your thumb and connects the spinal cord with the higher levels of the brain (the sub cortical and the cortical). It is in this brain stem where sensory-motor integration takes place. When I speak of sensory motor integration, I am referring to the processing and organization of information coming from inside as well as outside the body, i.e. learning about the environment and how to move through it. The outside information (external stimulus) is obvious: the 5 senses: smelling, tasting, hearing, seeing and touching. The internal stimulus, coming from the kinesthetic and vestibular systems, is not as tangible, but is obvious when we see children in play. Young children love to be in constant motion through climbing, playing on jungle gyms, etc. In these actions, they are activating the proprioceptive or kinesthetic system with sensations from the muscles, tendons and joints and the perception of movement, weight, and body position. Another internal system is activated when children creep, crawl, rock, jump, spin, or swing: the vestibular system. This system is dedicated to balance, gravity, equilibrium and our orientation in space. Whenever movement of the head occurs the vestibular system is activated, sending information to the vestibular nuclei in the brain stem, promoting brain stem growth. Thus, movement activities should be planned to stimulate these external senses and internal systems, which in turn, will stimulate growth of the brain stem, the starting point from which children learn.

Another developmental fact should be considered when planning developmentally appropriate movement activities. In a child's early years, the right and left brain hemispheres of the cerebral cortex begin to connect and learn to work together, coordinating motor skills. If we do not give this motor strip in the cortex time to mature, we cannot ask children to read, write, solve problems, remember com-

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plicated directions or even enroll children in organized sports. In fact, the American Academy of Pediatrics warns that most children under the age of six aren't ready for organized sports and should not have to participate in them. Children this age have not yet developed the necessary motor skills. So you see, there is a direct correlation between the body and the brain. The body and brain are not seen as separate entities but as totally integrated, one dependent on the other. Children are naturally doing the things they need to do to get their brain ready for learning. Learning experiences need to be designed to meet the physical, cognitive, social, and emotional needs of every child. This is what we mean by development of the 'whole child', 'whole brain', and 'whole learning'. We must wait until that little brain and body are ready to exercise together. The early childhood years are for active involvement in all the sensory motor activities that must be internalized to lead to accurate perceptual and effective conceptual development. Literally, learning how to learn!

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We will not have done our best for young children if we deny them the path to learning they seek through play, because young children are made to play. But we also will not have done our best if we fail to provide instruction. As much as it is true that young children play and discover many things on their own, it is also true that children need adult assistance or guidance.

~Judith Schickedanz

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