

Discovering
and Encouraging
Your Child's
Personal Learning
Style



*In
Their
Own
Way*

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Bodywise: Making Learning Physical

Peter was driving his teacher to distraction. Instead of sitting at his desk and concentrating on the lesson, he would get up from his seat and roam at will. His grades plummeted as his teacher's blood pressure rose. Yet one day, Peter's teacher learned an important lesson of her own. Instead of disciplining him, she let him move around the classroom since he didn't appear to be bothering anybody that day. Afterward, she questioned him about the material she'd been teaching and was surprised to discover that he'd absorbed the whole lesson. She began to understand that Peter was a student who needed *to move* in order to learn. She thought of different chores that he could do around the classroom while she taught her lessons, and from that time on, Peter's performance in school began to improve.

In many other classrooms around the country, Peter would have been labeled hyperactive and might have been medicated. Peter's teacher recognized what other parents and teachers around the country are beginning to realize: many children need to learn *through their bodies* in order to make sense out of academic subjects. These *kinesthetic* learners often become frustrated when they have to sit for long periods of time in confining desks doing tasks that involve minimal physical activity. While it may not make sense to let children wander through classrooms like Peter did, there are many practical ways of teaching academic subjects through physical activities. I will describe some of these alternatives later on in the chapter. Before I do, however, let's explore some of the reasons why the body needs to be brought back into children's learning.

Intelligence Begins in the Body

Child development pioneer Arnold Gesell frequently emphasized that "mind manifests itself in everything the body does." Jean Piaget reinforced this when he pointed out that the highest forms of logical intelligence can be traced back to their origins in the body. From the first days of life an infant's body is actively exploring the world and building a preconceptual framework that serves as the root of all later thought. For example, an infant's ability to grasp an object that has been moved away from his demonstrates the capacity to act consistently toward an object despite its changed appearance—in this case, its different location in space. This early capability prepares the way for a later development in middle childhood when children can internally represent objects from a variety of perspectives. They're able to mentally place themselves in the shoes of another person and imagine how an object looks from that point of view. This ability is fundamental to many higher mathematical processes.

In some individuals, thinking retains certain visceral characteristics even at the highest abstract levels. Albert Einstein, for example, spoke of his own thinking process as involving elements "of visual and some of muscular type." William James, considered by many the dean of American psychology, commented on a particular tactile quality to his thought: "I am myself a very poor visualizer, and find that I can seldom call to mind even a single letter of the alphabet in purely retinal terms. I must trace the letter by running my mental eye over its contour in order that the image of it shall leave any distinctness at all." James's "mental fingers" may go back to experiences he had as a young child tracing puzzle pieces or alphabet blocks. In any case, he seemed to have retained this early trait and used it to help him in his creative work (he wrote some of the world's greatest books on modern psychology).

Before humans communicated their ideas through abstract symbols, they used physical movements and gestures. For thousands of years, humanity passed on knowledge from one generation to another through a mixture of chanting, singing, dancing, and drama. Even with the development of written language, this unity of mind and body remained intact for hundreds of years. Dom Jean Leclercq, a Catholic scholar, suggested that monks in the Middle Ages saw reading as a physical activity. He observed that the Latin words *legere* and *lectio* (which, in part, translate as "to read") have a kinesthetic meaning: "When *legere* and *lectio* are used without further explanation, they mean an activity that, like chant and writing, requires the participation of the whole body and the whole mind. Doctors of ancient times used to recommend

reading to their patients as a physical exercise on an equal level with walking, running or ball playing.” How different this is from our idea of reading today as a mental task based on the “distance senses” of seeing and hearing.

Putting the Body Back into Learning

We seem to have lost this connection between learning and the body in our society. We expect children to sit still in their seats and read, write, or compute silently. Parents and teachers often tell students who fidget while they work to settle down. Sometimes educators refer these kids for testing and they’re labeled hyperactive or learning disabled. Sub-vocalizers—or students whose throat muscles quietly work to pronounce the words they read—go to reading specialists who try to help them eliminate this “annoying habit.” It’s seldom understood that these children could be practicing on some deeper level an oral tradition going back thousands of years. Children who move, speak, and fidget while they work may need to study in this physical way in order to make any meaningful contact with the lifeless symbols in front of them.

We’re told that children who need to move while they learn sometimes have neurological problems. The learning disability experts warn us about the “soft signs” of minimal brain dysfunction: mixed dominance—for example being left-handed, right-footed, and right-eyed—difficulty telling left from right, poor eye-hand coordination, certain atypical muscle reflexes, or general clumsiness. Hundreds of tests and programs purport to identify and remediate these “neurological dysfunctions.” Yet medical doctors have yet to clearly establish any measurable brain damage in the vast majority of children with these so-called symptoms.

If you have real concerns about your child’s sensory-motor functioning at any time, consult with your family physician. However, in general it appears that most of the children showing these characteristics have absolutely no neurological problem. Instead they may have neurological *differences* or unique learning styles—of a kinesthetic and/or spatial kind—causing them to be unbalanced by a system of instruction that splits them off from their natural connection to learning through the body.

Special education programs make the mistake of attempting to isolate children’s sensory-motor problems and then train them through artificial activities such as walking on balance beams, crawling on specially designed mats, putting together puzzles, doing mazes, or bouncing on trampolines. If children actually enjoy these activities, that’s one thing. However, we’ve seen in Chapter 4 that research fails to support the effectiveness of most of these activities as learning tools. I would suspect the reason these programs don’t work is because children experience life with their whole body, not with the sum of its parts. In order for children to reclaim their bodily processes for learning, they need to be involved in physical activities that are intrinsically worthwhile to them, not isolated from the mainstream of their lives. This goes for each and every child in school, and not simply those suspected of neurological anomalies. The best sensory-motor activities for so-called “special ed” kids are activities that are healthy for all children. These include running, jumping, dancing, hiking, juggling, swimming, martial arts, outdoor games of all kinds, and lots of time to touch, move, and build things with their own hands.

Eliminating Bodily Stresses during Academic Study Periods

Michael Gelb, a bodyworker assisting in British schools, noticed that youngsters experiencing difficulty in schoolwork often tightened up their bodies and restricted their breathing. Teachers added to this tension by pushing harder for answers. Gelb helped these students become aware of their twisted positions and tensed breathing patterns. He encouraged them to open up and expand their breathing and posture. Often this alone would help them see the correct solution or remember the right answer to a particular problem or question.

You can help your child feel more comfortable while studying at home. During her homework time, notice how she sits. Does she appear relaxed and centered or tight and distraught? Ask her to describe the feelings in her body. Then suggest that she experiment with other ways of sitting, or propose that she even try studying in a standing or supine position. Jeffrey Barsch, a California educator, found that his students were able to read and listen better when they were lying down. Each child has her own best way of studying. The strongly kinesthetic child often needs to tap feet or change positions several times in the course of a few minutes. One teacher custom-built a special worktable for such a child that included an old sewing machine foot lever attached to the table leg, so that the youngster could move his foot rhythmically while he studied.

Help your child become aware of her breathing. Is it flowing and easy or shallow and constrained? Sit with her for a few minutes in silence, breathing deep and full breaths at a slow and comfortable pace. This simple act of breathing can unlock the floodgates to natural learning. Georgi Lozanov, a Bulgarian educator regarded as the father of “super-learning,” uses breathing as a cornerstone of his teaching method. The learner sits or lies down in a comfortable position, listening to slow and rhythmic musical selections. The teacher reads in a similarly rhythmic manner the words, numbers, or concepts to be learned. The learner breathes deeply in time to the music and words, effortlessly and quickly absorbing information that might otherwise have taken days of hard work to master. For specific information on using this technique, see *Superlearning* by Sheila Ostrander and Lynne Schroeder and *Accelerating Learning: The Use of Suggestion in the Classroom* by Allyn Prichard and Jean Taylor.

Using the Body to Teach Basic Skills

The general picture we get of children in the act of school learning is of them sitting at desks looking up at the blackboard or looking down at their worksheets or textbooks. In this scenario, muscular movement is pretty much restricted to the neck, eye, and hand muscles. For learning to really sink in, however, it also needs to involve complex movements in the large muscles of the arms, legs, and torso.

Body reading. When your child reads at home, have him take little “muscle breaks.” These might include jogging, aerobic-type exercises or traditional calisthenics like neck rolls and leg lifts. Any activity that involves the right side of the body making contact with the left side of the body is especially helpful in establishing connections between different parts of the brain. Some of these activities include:

- walking in place exercises where the child alternates touching his right knee with his left hand and vice versa;
- doing sit-ups in which he alternates touching his right knee with his left elbow and vice versa;
- playing Simon Says-type games with instructions like “touch your left toe with your right middle finger” or “touch your right earlobe to your left ankle.”

Betty Brenneman, a Wisconsin educator, worked with a ten-year-old boy who’d made little progress in reading during the previous two years. She timed his oral reading before and after doing the kinds of exercises described above and discovered a big improvement in his reading rate and a decrease in the number of errors. Paul Dennison’s book *Switching On* includes these and other exercises that can be used during oral and silent reading activities or with any other skill.

When your child meets with an unfamiliar letter or word, suggest that he imagine it to be a miniature playground and invite him to get involved. For example, with the word *put* he could act out crawling through the loop in the *p*, sitting astride the horseshoe *u*, and climbing up the *t* or sliding down its shaft. He can also make the letters with his own body or create entire words with other children and adults.

Give your child opportunities to act out what he reads instead of merely telling you about it. Reading comprehension is frequently a dull activity for kids because they feel no connection to what they’re reading. If they put on plays or in other ways dramatize their reading material through pantomime, dramatic recitation, or dance, the meaning will become encoded in their bodies and remain with them for a long time.**Body writing.** As mentioned in Chapter 5, bodily-kinesthetic learners usually do better when

they learn to write before they read. This is because writing involves direct interaction between the body and letters, whereas reading as typically taught only uses the distance senses—seeing and hearing. A lot of children get rushed into writing activities requiring the use of only the small motor movements of one hand. These youngsters need to begin their writing experience with large body movements.

Before your child even starts to write symbols he ought to have a lot of experience with freestyle art activities including painting, collage, and working with clay. Then, when he shows an interest in letters and numbers, suggest that he try some of the following alternatives to the usual workbook routine in practicing numbers and letters:

- get huge sheets of butcher paper and write on them in large strokes with thick crayons, magic markers, or a large paint brush;
- go out to the driveway and write on the concrete pavement with sturdy pieces of white or colored chalk;
- go into a dark room and practice “writing” with a flashlight or “light-saber”;
- take a squirt gun out to the side of the house and create words in water;
- go out to a muddy field and draw letters and numbers in the mud with a long stick;
- save old toothbrushes and use them as writing implements with finger paints;
- make letter shapes with molded clay;
- practice writing letters or numbers in a sandbox or on a beach.

Supply your child with letters and numbers he can use as models. These should be textured in some way so that he can feel each individual letter shape before writing it. Buy sandpaper letters from an educational supply store or make an alphabet from some of the following materials: sandpaper, bread dough, macaroni, rice, pipe cleaners, yarn, glue, seeds, glitter, clay, cloth, toothpicks, straws, bottle caps, twigs, or wire.

Body spelling. Spelling drills are usually dull affairs for children (“Repeat after me, DOG, D-O-G, DOG”). There’s no real interaction going on for these youngsters beyond staring blankly at the word to be memorized. To involve the body, suggest that your child perform any of the following activities while spelling a word: jump while saying each letter; alternate standing up and sitting down (*A* (up), *N* (down), *D* (up), *AND*); alternate jumping and squatting; clap loudly while shouting each letter; lie down on the floor only when repeating the vowels. Ask them to make up their own sequence of body movements.

Body math. An excellent way to learn mathematical concepts kinesthetically is through math manipulatives. These are concrete materials—such as blocks, rods, dice, and chips—that kids actively touch, move, stack, and maneuver to explore relationships at the heart of basic mathematical operations. One commercial brand of math manipulatives, Cuisenaire rods, give children the opportunity to compare and contrast differences in length between several sizes and colors of thin wooden blocks. In playing with the rods, they learn, among many other things, the principle that there are several ways of combining small rods to equal the length of a larger rod. For example, it takes a white rod plus a purple rod to equal the length of a light-yellow rod. A dark-yellow rod plus an orange rod *also* equals the length of a light-yellow rod. This discovery paves the way for a later symbolic understanding that there are several ways of adding numbers together to create the same sum (for example $3 + 3 = 6$; $4 - 2 = 6$; $5 + 1 = 6$). Children experience this principle with their hands first and their minds later.

Manipulatives don’t work with all children. Some kids are turned off to them because schools often use them in the same coercive way they use worksheets. Other kids must go more deeply into kinesthetic learning and rediscover numbers in their bodies. In a sense, they need to explore the meaning of numbers just as they originally developed in the course of history. A measurement such as a foot, for example, was originally based on the length of the king’s foot. Our base ten system of place value goes back to the use of ten fingers in counting.

Here are some suggestions for building the body directly into your child’s basic math program:

- let your child use her fingers to add, subtract, multiply and divide; teach her chisanbop—a method of mathematical calculation based on the systematic and rapid use of the fingers;

- draw a number line in chalk on the sidewalk or driveway; then have your child practice doing arithmetic problems by walking, running, jumping, or skipping along the number line;
- help your child measure her height and weight, the length of her arms and legs, the area of her skin, and other bodily measurements;
- show her how to use her own body to measure other things—for example, the length of a room in human “feet”;
- help her explore different geometric forms through creative body movements;
- assist her in telling time by drawing a large body-sized clock face in chalk on the sidewalk and then have her lie down on it using her arms as the clock’s “hands”;
- suggest that she act out math word problems instead of simply trying to figure them out in her head.

For other ideas, see the book *Teaching the 3 R's Through Movement Experiences* by Anne G. Gilbert and *Unicorns are Real* by Barbara Meister Vitale.

Kinesthetic Symbol Systems

Consider using kinesthetic symbol systems as alternatives or supplements to the standard English alphabet. Some children experience tremendous difficulty learning to read in spite of creative teaching and may benefit from an alternative symbol system to help them get started. One example of this is the use of braille, a symbol system based almost entirely on the sense of touch. This approach has been successfully used to teach reading skills to children labeled as severe dyslexics. One mother wrote about her fifteen-year-old daughter, Roselyn, labeled everything from mentally retarded to gifted, who still could not read beyond a mid-second-grade level. After ten months of braille instruction, she phoned home from school and excitedly told her mom how she’d passed her tests and completed all the requirements for third grade—a remarkable achievement given her previous school record. Her braille teacher observed that Roselyn’s sense of touch was “the most sensitive of any child I have ever taught.” This gift appears to be present in other children experiencing reading difficulty. One study observed “retarded readers” showing a significant superiority over “normal readers” on four tests of tactile ability.

Another symbol system involving both kinesthetic and spatial intelligence is sign language. By using gestures and hand signals to create letters, words, and concepts, children who might find reading a chore can experience success. A mother from Alaska wrote me about her daughter, who was having trouble learning to read. She then enrolled with her family in a sign language course at a local college. Her mother wrote: “I wish you could see this ‘dyslexic’ child learn those signs and recall them with her marvelous memory. She’s one of the best in the class.” I don’t know whether it’s coincidence or not, but right about this time her mother reported that she began reading—sat down and read a whole novel in one day. These two success stories are a testimony to the special needs of individuals with strong bodily-kinesthetic intelligence who can succeed when parents and teachers tap this natural channel of learning within them. Even kids who read well may enjoy learning braille or signing as a way of expanding their communication skills.

The Body as an Adjunct to Learning

There are many other ways of bringing the body into learning. At school, simulation, role play, field trips, improvisation, and hands-on activities provide the basis for teaching virtually any subject. One biology teacher had his students learn the rudiments of molecular bonding by assigning to them the roles of atoms. The hydrogen atom could only bond to other student-atoms with one hand, the oxygen atom with two hands. In this way, they learned how different compounds and molecules form. Another teacher taught American history by having students spontaneously act out the roles of newly arrived immigrants from England to colonial America.

At home, you don’t have to look far to find areas where kinesthetic learning takes place. Simple

chores such as cooking, cleaning, gardening, and helping to fix things around the house develop body-knowing. So do hobbies including carpentry, weaving, knitting, nature study, art activities, and sports of all kinds. In the same way dance, massage, wrestling, skateboarding, karate, juggling, and model-building develop a number of important physical abilities including eye/hand coordination, left-right orientation, balance, reflexes, body awareness, manual dexterity, and all those other psycho-physical skills so important to academic learning. The point is that these activities are worthwhile in and of themselves, and not simply as exercises to “remediate learning dysfunction” or “develop your child’s intelligence.” Take care not to use them in this way. Children often resent having adults foist these special “learning activities” on them, and tend to learn best when engaged in activities for their own sake.

It may seem ridiculous to say this, but children take their bodies with them wherever they go, whereas they’re more likely to leave their workbooks and folders behind. As more parents and teachers begin to recognize the importance of the body in learning, we’re likely to see a sharp decline in the number of so-called disabled learners and a corresponding increase in real learning capacity and enjoyment among millions of children nationwide. This is also true for the role of the imagination in learning. The next chapter explores the importance of fantasy and “visual thinking” in the lives of children.