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Squeeze Play

Donnie was too quick, and I had strayed too far from the can. He had the shorter route to the tree; before I could react, he kicked the can across the graveled driveway and into the neighbor's yard. Donnie raised his hands in triumph and declared victory at the top of his lungs. The rest of the kids came running as they realized the game was over. As we all gathered under the huge oak tree, Donnie's mom came to the side door of his house to announce that it was time for dinner. As we all scattered to our own homes for the evening meal, someone retrieved the can from the yard next door and threw it under the oak tree, where it would remain until the neighborhood kids made it the centerpiece of yet another afternoon's fun and games . . . including kick the can.

When I was growing up in Pennsylvania in the 1950s, outdoor games like kick the can, red rover come over, hide and seek, tag, four square, and a dozen others occupied the kids in my neighborhood for hours on end. Twisted ankles, skinned knees, and broken bones were the widely accepted consequences of preadolescent years that were very much lived outside. We held neighborhood parades, spent hours in the creek that ran between properties at the end of the street, and chased each other through backyards up and down Gibson Street. One neighbor had a swimming pool and a small basketball court, and in good weather both were crowded. Winter storms did not deter us; we built snow forts and played snow football for hours on end. I can remember spending a great deal of time shivering and thawing out on a little chair over the living room register, sipping hot cocoa provided by my grandmother. We slept well at night because we had played well during the day.

I can remember the day my grandparents, with whom I spent my early youth, brought home their very first television set. It was a black and white TV—there were few color sets at the time—and my grandfather would watch the evening news and his beloved baseball; for my part, I discovered *The Mickey Mouse Club* and *The Howdy Doody Show.* These were pleasant diversions, but as kids, our time was spent outdoors. Walking home from school, I anticipated doing my homework (mandatory) and watching Annette, Cubby, and the rest of the Mickey Mouse Club gang before washing up and reporting to our kitchen for dinner (also mandatory). Then, it was outside again while it was still light enough to play and perhaps get into trouble (optional, but relatively frequent, as I recall). During any given week, I was outside far more often than I was in the house, and I watched perhaps five hours of television per week—most of that very early on Saturday mornings—before heading back outdoors.

We burned off calories by the ton, and obesity was a vocabulary word. Dinner was a regularly scheduled event, *and conversation with adults during mealtime was part of the deal.* During the summer vacation and on weekends, we came inside long enough to eat lunch—then it was back outside. Exercise and conversation were two sides of the coin of life in the fifties—at least for the kids in the two-dozen or so houses on my block. We enjoyed watching television, but the main event took place on a daily basis in the yards, creeks, streets, and alleys of my small hometown in northwestern Pennsylvania. It was rough and tumble; it was often highly competitive; and it was outdoors.

Smith (2005) emphasizes the importance of play in the lives of kids, pointing out that it is like "the best learning" in that "play involves lots of rehearsal and repetition" as "children do the same things again and again" (p. 160). To play kick the can in our neighborhood required three things:

1. We needed a can, of course. A new can was preferable, but one that was well battered, but functional, was acceptable.
2. We had to be *physically present* for the game. There were no "virtual" kick-the-can sessions; as long as we could assemble at least five neighborhood kids for that or any other outdoor pastime, we were ready to go.
3. In any number of different outdoor games, we would invariably agree on a set of rules, determine as a group if a rule had been broken, and subsequently—*and collaboratively*—work out any number of problems or sticky situations related to the game or activity.

We were active, and if inclement weather seemed likely, we put on our galoshes and raincoats, and we went outside anyway. The use of the family car for any purpose was limited; most of the kids in town walked to school. Smith (2005) recommends, in light of a reduction in the amount of outdoor exercise they get, we not lose sight of the value of play in the lives of children:

> With more and more children being delivered to and picked up from neighborhood schools, sitting in front of televisions or computer screens, and losing the skills of cooperative play their grandparents learned, maybe it is time to start teaching children to play. (p. 160)

Play that combines exercise with social interaction is healthy, and it enhances cognition.

Exercise and Cognition

Medina (2008) laments that in our headlong rush to pass end-of-year state tests, schools are squeezing physical education and recess out of the school day, thus reducing the amount of exercise students get in school. Medina affirms, "cutting off physical exercise—the very activity most likely to improve cognitive performance—to do better on a test score is like trying to gain weight by starving yourself" (p. 25). Ratey (2008) reminds us, "In today's technology-driven, plasma-screened-in world, it's easy to forget that we are born movers—animals, in fact—because we've engineered movement right out of our lives" (p. 3). When a kid today announces he is going to go play baseball, he may in fact mean he is headed for his bedroom and an individual session with a video game. A snowstorm was an invitation to go outdoors for snowball fights and snow football; how many kids today look out the window at the falling snow and think to themselves, "I hope we don't lose power."

If indeed there is a trend away from regular physical exercise on the part of children, this is doubly disturbing because the same physical exercise that has a positive effect on the health of our kids also improves cognition. Medina (2008) cites a study that found that kids who jogged for half an hour two or three times per week began to show improvement in cognitive performance 12 weeks into the study. According to Medina, "When the exercise program was withdrawn, the scores plummeted back to pre-jogging levels" (p. 15). Physical exercise is critically important for kids; it keeps them physically healthy while it enhances their ability to think.

In one Canadian study (Shephard, 1996, in Trost & van der Mars, 2009–2010), over 500 elementary students were given a full extra hour of PE *every day.* The result was that "students in grades two through six who received additional physical education earned better grades in French, mathematics, English, and science than did students who received the standard one period per week" (p. 62). When I present in schools around the country, I often have the PE teachers stand and be recognized. While they are standing, I explain that "these people are your first line of offense against obesity and lethargy, and they prepare your kids for their next stint in your classrooms by improving blood flow, increasing heart rate, and releasing neurotransmitters by the ton."

The clear connection between movement and cognition has implications for teachers. Movement, as we have seen, increases blood flow; that increased blood flow benefits the brain by carrying to it more glucose (for energy) and oxygen. Teachers who have their students sit for extended periods in an effort to help them concentrate are working at cross-purposes. If movement sends more blood to the brain, it follows that teachers should give students every opportunity to move in the classroom. Rather than squeeze physical education out of the curriculum, districts need to make certain kids get plenty of exercise *every* school day.

Changing Classroom Habits

For many years, frequent classroom observations around the country have brought me to at least one firm conclusion: As kids get older and move through the educational system, there is less intentional movement in the classroom. I have had teachers tell me that seated, quiet kids are well-behaved kids; having them move more would likely lead to chaos and a loss of control. Allen (2010) encourages teachers to think carefully about this:

> If our students are uncomfortable, fidgeting, and incapable of concentrating on our lesson, making them sit still only gives us the *illusion* of control. So, let us surrender this illusion, and deal with the reality that student engagement requires them to move—frequently. (p. 101)

Rather than fighting the students' natural inclination to move, teachers can enhance cognition by getting them up and moving. This has the happy effect of cutting down on classroom-management problems because, simply put, the level of student boredom drops.

When I coach teachers, I typically spend 30 minutes in a classroom, and I spend that time observing the students—not the teacher. If the students are seated for the entire half hour, I often notice body language (yawning, gazing at the window, tapping a pencil, passing notes, or making any number of exaggerated gestures) that indicates an increasing level of disengagement. Teachers often put this kind of behavior down to "students who no longer want to learn!" Any teacher who thinks this is a uniquely modern comment based on "the kids not being the way they used to be" might consider that when I started teaching in 1971, we sat around the faculty lounge and said the same thing. Continually playing the blame game is frustrating and draining, and it is simply not productive.

It is indeed true that kids have changed. Teenagers who stay up until the wee hours, texting and checking Facebook in their bedrooms, drag themselves to school in the morning. Sheryl Feinstein (2004), in *Secrets of the Teenage Brain,* points out that puberty brings with it a hormone (melatonin) that causes teens to go to bed later and sleep well into the next morning—assuming they have a choice. High schools that begin classes as early as 7:30 a.m. disrupt this natural pattern, and kids come to school tired and grumpy. Many districts have shifted their start time for high schools because they understand the value of a bit of extra sleep for their students.

Regardless of when the school day begins, when one high-school student after another begins to nod off in a 90-minute block, it may be easy to blame the student. In fact, much of the problem could be solved by making students less passive and more active—and that includes getting them up and moving as much as possible. I recommend that teachers in middle and high school *do something different* every 10 minutes or so. If the kids have been sitting, have them stand and engage in a paired or group activity. If they have been standing, have them sit and do something else. If they have been working *individually* for 10 minutes, let them stand and find a partner for a purposeful conversation about what they just read or wrote about. Teachers need to work movement into their plans; the alternative is to let students work movement into *their* plans. When teachers do not allow for movement, or for brief periods of exercise, classroom-management issues invariably come to the surface.

Harnessing Movement as a Tool

Over the years, I have had the pleasure of visiting scores of classrooms where teachers understand the importance of getting kids up

and moving on a regular basis. In classrooms where this is *not* the case, students tend to become increasingly fidgety and disengaged. Teachers who clearly understand the relationship between exercise and cognition make certain their students don't have to sit too long without a change of pace in the form of standing, moving, and interacting with other classmates.

I can report that, in my early days of teaching, I believed that if I could get my students to simply sit there and remain quiet they would be able to concentrate and focus. It never occurred to me that a brain break every few minutes might help them focus when they sat back down. I failed to consider that *I was the only one in the room* able to move, talk, gesture, and otherwise satisfy my urge to fidget. I strolled while lecturing; I walked around the perimeter of the room while my students were watching a video; I ambled up and down the rows while they were taking a quiz or test. In short, *I moved* while *they sat* and took notes. Looking back on it, I'm surprised they did not all fall asleep or run screaming from the classroom.

One timeless ritual teachers can modify to allow for more movement in the classroom is the distribution of handouts and other materials. On more occasions than I can count, I stood at the front of each of five rows and gave the first person in each row enough worksheets, test sheets, or handouts for everyone in the row. Once again, the kids stayed seated while I walked along the front and distributed the materials. One way to change this is to have students stand up and go get the handout somewhere in the room to the accompaniment of an upbeat song ("The Wanderer?"). The music and the movement serve as energizers, and the whole task can be accomplished in the same approximate amount of time it used to take to give a handout to each student. Or, the teacher can simply fan out the sheets of paper in her hand, throwing them up in the air and letting them cascade down while students scramble for them. An appropriate song can accompany the event ("Let It Snow?"). The resultant movement and laughter at this novel way to distribute paper can once again serve as a great energizer.

Emma Jeter—Grade 5 Math/Science

While I was in her classroom, Jeter's fifth graders were taking a math quiz; she had them pause twice and stand in order to do the "chicken dance" before resuming their seats and continuing with the quiz. She did this because she understands the connection between exercise and cognition, and she put that understanding to good use during the quiz. Frequent movement is a hallmark of Jeter's lesson plans, and painted on her classroom floor

is a number grid on which students practice basic mathematical computations. The kids in her classroom love being able to get up and move frequently; it should be pointed out that 100% of her students passed the state math exams the first year she transitioned from a traditional to a more-active classroom. Also notable is the fact that Jeter was one of two teachers on the fifth-grade inclusion team at her school. She clearly understands that students in special-education programs are often highly kinesthetic learners who really value the change of pace.

I can personally attest to the fact that the fifth graders in Jeter's care love coming to that classroom. She puts a great deal of time and effort into frontloading success by creating lessons and activities that require movement. I observed her classroom for the better part of three hours. The students were never seated for more than a few minutes, and she used music to get them to and from their seats. The contrast between this and traditional classrooms (lots of seatwork, videos, lecture, and worksheets) is stark. Fifth graders, who have a natural inclination to move, sing, dance, wiggle, fidget, and talk, find an outlet in Jeter's classroom. Moreover, they often go home and talk about what they did in class today—without being prompted. We interviewed one parent who said her twins talked incessantly about what happened most days; she said the evening meal often resembled dinner theater.

Marylise Cobey—Elementary Special Education

Cobey takes every opportunity to encourage movement. In her special-education classroom, she has replaced her chairs with stability balls. According to Cobey, her students love being able to bounce while they work; the use of the stability balls allows them to move and concentrate at the same time. One student who had been procrastinating on a writing assignment in another classroom was sent to her class to complete the work. Sitting on one of the stability balls at an empty desk, he went to work. A few minutes later, he looked up and said to Cobey, "I finished—how did I do that?" He had rolled, bounced, and written his way to assignment completion.

In Cobey's classroom, seatwork can be done at the students' desks or anywhere space is available. The kids are the ones who stand and get the supplies when needed; they take hokey pokey breaks during nine-weeks testing; her review games involve movement. Cobey has them do exercises frequently. Movement is also incorporated into the songs she writes for science and social studies units. Cobey's students respond well to this purposeful movement, and it has become an important part of her instruction.

Movement in the Middle

As a former middle-school social studies teacher, I have always been fond of telling people that teaching a class of seventh graders is like trying to hold 30 balloons under water simultaneously. Early in my teaching career, my students always seemed to want to sharpen a pencil, go to the restroom, head for the wastebasket to throw away a piece of paper, or otherwise fidget to the beat of a drummer other than my good self. As someone who held a very traditional view of classroom process, I tried to keep the lid on all this seemingly unnecessary motion. As the days passed during any given week, I became more and more exhausted as I wondered what other professions might pay a living wage while providing far less pain and suffering.

Not all the pain and suffering was mine. My attempts to get the kids to sit still and hunker down was, through the lens of hindsight, a little like holding the lid tightly closed on a pan of boiling pasta; the results are predictable and messy. Like many educators at the time, I had no understanding of the positive relationship between movement and learning. We have a far better understanding of this now, and, as reported by Jensen (2005), "Evidence from imaging sources, anatomical studies, and clinical data shows that moderate exercise enhances cognitive processing" (p. 67). Every day, these connections become clearer, but this was far from the case in the 1970s and 1980s.

It was not until the early 1990s that I began to design lessons to get my students to move more in the classroom, although these were admittedly tentative steps. I made this course correction because the special-education teacher on our (inclusion) team took me aside and told me that students in special education were often highly kinesthetic; those kids needed to stand and move frequently. We also had a number of ADHD students on our team, and the more I researched that topic, the more I recognized that I had a good deal in common with those kids. The difference was, of course, that I could move anytime I wanted in my classroom; it slowly began to dawn on me that movement needed to be an integral part of the lessons for students as well.

With the help of that special-education teacher, I began to shift the workload from myself to those seventh graders. I involved them more, and at one point I even had my sixth-period class write a play in class, with each of six groups of students working on a different act of a play on the impact of the Fugitive Slave Act and the Dred Scott Decision on slavery and the coming of the Civil War. My job was not to lecture, as I had been used to doing over the years, but to *facilitate process,* and I can remember how enjoyable an experience that was.

The most amazing part was that it was totally serendipitous. Writing the play, and letting them move around the room in order to dovetail action in the various acts of the play, was not in my lesson plan; I scrapped whatever I had been going to do, divided the students into groups on the spot, and let them go.

If there was one seminal moment in my transformation from a passive classroom to a more active one, that was it. In fact, I still have that play. I also wrote a play that year, called *Snow in April,* and the kids performed it for each other and for the camera. Again, I still have the video cassette, and I can recall the feeling of release that came to me during those two years as I began to get my seventh graders up and moving, interacting, creating, and otherwise far more involved in their own learning process than in previous years. I had them give speeches (optional), and one 13-year-old girl (in special education) gave a speech on abolitionism so moving that her classmates gave her a standing ovation. It was marvelous, and that year (1993–1994) marked my transition from chief lecturer and grand poobah to a facilitator of process; my students did more, and I did less, and we all enjoyed it immensely.

One problem with teaching in one's own classroom day after day is that we seldom get to observe *process* objectively. We're so busy trying to orchestrate the action from the stage that we miss the perspective that comes with being able to observe what is happening *from the balcony.* I finally had the opportunity to do that as an instructional specialist, when part of my job was to observe all social studies teachers new to our school district. From a desk in the back of the classroom, I was able to watch the teacher and the students. While my task was to observe the teacher "in action," I learned more by watching the kids. Were they interested? Were they engaged? Were they asleep? My seat in the balcony opened my eyes, and it began to open my mind.

Shortly after accepting the instructional specialist position, I was placed in charge of professional development for the office. At a national conference, I saw Laura Lipton and Bruce Wellman, coauthors of *Pathways to Understanding: Patterns and Practices in the Learning-Focused Classroom* (2000). The idea of shifting classrooms from teacher-centered to learner-centered places seemed to make perfect sense, and I brought Lipton and Wellman to our school district as soon as I could arrange it. In their workshops, we paired, we processed information in groups, and *we moved frequently.* The combination of my observations in middle-school social studies classrooms and that two-day workshop completed my transformation from running a passive to an active classroom. Teachers who provide frequent opportunities for students to stand, pair, and process information move their classrooms in the direction of a more learner-centered environment.

Below are two excerpts from language-arts lesson plans, and I include them because they highlight movement in the pursuit of collaboration.

Kathy Galford—Grade 6 Language Arts

To the accompaniment of an upbeat song, Galford's sixth graders stand and join classmates at one of six charts affixed to the walls. Each chart has one of the six figures of speech (simile, metaphor, hyperbole, etc.) labeled at the top. Each group has a different colored marker, and one student serves as recorder as students in that group create a graffiti wall—listing definitions, examples, or descriptions on the chart. Music moves them from station to station as groups get a chance to contribute to each chart in turn. The recorder changes with each transition, and the number of sentences grows as the activity continues; groups wind up at their original chart at the end, where they are given an opportunity to see what has been added during the exercise. This 10-minute activity, called a gallery walk or walkabout, involved Galford's students in something that was at once auditory, visual, and kinesthetic.

The activity described above is one among many components of a 50-minute lesson plan intended to deepen the students' understanding of figures of speech. Every component of Galford's lesson contains aspects of collaboration, and the movement in this and other activities connected to figures of speech does a beautiful job of enlisting exercise in support of cognition and memory. I watched the students for the entire time, and they were focused and engaged for every facet of the walkabout, as well as for the other activities in the lesson. She modeled or gave instructions—and they *did.* She modeled—they *did.* She facilitated process, and she listened to the groups and read the charts; this gave her some things to say when it was over. By working her way around the room, she discovered what she needed to do to clear up any misunderstandings or fill in gaps in students' learning that became apparent. Galford has found a way to move her students from seatwork to feetwork, harnessing their desire to *stand, move,* and *share*.

Moving up one grade level to seventh-grade language arts, grammar is the focus of an activity meant to review the rules of comma usage. Dani Crawford created sentences subsequently typed on index cards that were then laminated for frequent use. Each student is given a dry erase marker and one of the laminated cards prior to the start of the activity.

Dani Crawford—Grade 7 Language Arts

As the students look to the four corners of the room, they see wall posters labeled as follows:

Poster 1: Use a comma before conjunctions in a compound sentence.

Poster 2: Use commas to set off and enclose an appositive phrase.

Poster 3: Use a comma after an introductory clause phrase at the beginning of a complex sentence.

Poster 4: Use commas to show quotations in conversations.

When the music begins, students look at their laminated cards and make corrections using the markers. Fred, for example, finds he has a card with the following sentence: "Skippy's neighbor Mr. Rogers just returned from his vacation to Hawaii." Using his marker, Fred corrects it to read, "Skippy's neighbor, Mr. Rogers, just returned from his vacation to Hawaii."

Having made the correction, Fred glances around the room, and then moves to Poster 2: Use commas to set off an appositive phrase. Cindy is already there, and Fred and Cindy share how their cards demonstrate why the comma rule on Poster 2 applies to their sentences. This happens in all four corners of the room, and it is possible that students may be standing under the wrong poster, in which case students become teachers, and other students have to defend their choices or move to the correct poster.

Students make the needed correction; they self-sort, moving to a corner of the room; they compare (and possibly defend)—and all the while, Crawford moves about the room and listens. She models, and they do. She gives instructions, and they move.

Crawford reports that while this activity allows students a chance to review the use of commas it also gives them an opportunity to get up and move. The use of the laminated cards and dry erase markers provides a novel way to make corrections, and Crawford's role during the activity is to facilitate process. She moves around the classroom, and she listens to the conversations for concepts she might have to reinforce when the exercise is done. By simply circulating from poster to poster, she can check for understanding by listening to the explanations.

Common wisdom may dictate that grammar is not the most exciting subject in the eyes of students. My experience is that many *teachers* give it short shrift, ignoring it in favor of other, more-interesting language-arts topics. In the activity above, Dani Crawford has shown

a willingness to harness the power of movement and music in a collaborative activity that students enjoy, and from which they gain a better understanding of these basic building blocks of language. Instead of wringing her hands and grabbing a fistful of worksheets, *Crawford has frontloaded the process with a novel approach to learning.*

Moving beyond the content for a moment, Crawford also has the opportunity to take a balcony view of group process. Are students working well together? If they are in the position of correcting other students, are they doing so gently and with empathy? When students are engaged in an activity that combines movement and collaboration, they are doing the work. If they are doing the work, teachers can stand back and observe in a way that can lead to process improvement the next time around. If things did not go well from a collaboration or time-management standpoint, teachers have the opportunity to involve students in identifying causes and looking for solutions.

Movement and Novelty in the High-School Setting

The brain thrives with exercise, as we saw earlier in this chapter, and it also craves novelty. Sousa (2001) affirms that, "the brain is constantly scanning its environment for stimuli" (p. 27). A classroom environment that does not provide sufficient external stimuli (music, movement, laughter, change-of-pace activities) and instead "contains mainly predictable or repeated stimuli" actually "lowers the brain's interest in the outside world and tempts it to turn to novel sensations" (p. 27). Teenagers who sit for any length of time without doing something different, novel, or otherwise out of the ordinary may turn inward and spend a good deal of time daydreaming; today's students may reach for their cell phones in order to do some clandestine texting. They thus control their environment to the extent they can without getting into trouble with the classroom teacher.

When I am writing a book manuscript, I have almost total control over when I write and when I stop writing. During the week, I typically go to a local fitness center to work out as early as 5:00 a.m. Following that, I have a bowl of cereal, watch some news on television, and then open a file on my computer to begin work on whatever manuscript is in the pipeline. As much as I love writing, I find my brain pulls me away in its continual search for something different or new. An e-mail will distract me, as will a visit from one of our cats. I can get up from the computer when I want to; I can get a snack in the kitchen when

I wish (too frequently, I admit); I can turn the music on or off when I desire; I can go work in our yard when I feel guilty (less frequently, perhaps); and I can simply stand and stretch when the need arises. In short, I am in total control of what I do and when I do it.

I also love listening to lectures on tape or CD while I drive. I always have one or more books on tape or lectures by prominent university professors in the car. If my mind wanders while driving, or if something the lecturer says causes me to start processing information, I may miss whole sections of the narrative or lecture. It matters not, however, because I have something magical called "stop" and "reverse" built into my car's sound system. Once again, I am in total control of my destiny (or at least of my car's stereo). I can give in to my distractions and my brain's propensity to switch gears *and still not miss anything in the lecture or book.* Once again, I call the shots.

The same cannot be said of high-school students in a 90-minute block, one of several during the day. They have no stop or pause buttons, and a high-school social studies teacher who feels the need to cover all of United States history in one school year may be moving at a breakneck pace in order to get beyond the Watergate scandal of the 1970s by spring. Information is coming so quickly to students, who may be passive (and seated) observers, that it is difficult or impossible for them to do more than take a few rudimentary notes and hope those notes and the textbook will provide some illumination in the evening or on the weekend. The truth is that the "repeated stimuli" of the high-school teacher's voice may cause many of the teenagers in the class to turn inward—and go to a better place in their minds.

The alternative is to get high-school students up and moving, sharing and processing information with each other—all to the accompaniment of music suited to the task. An upbeat song, for example, can serve as a background for moving from individual desks to pairs, trios, or small groups. The combined stimulation of the music and the movement will serve to get students ready for whatever comes next, and their brains and their bodies appreciate the change of state made possible by the teacher. A teacher who takes into account their students' need to do something different frequently is in a position to positively affect learning with various novel approaches to the content.

Julie Poclayko—Grade 11 AP Language and Composition

In Poclayko's AP class (90-minute block), she and her students study a unit on the nature and specific types of satire. Rather than facilitate a long discussion

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on the topic while students sit at their desks, Poclayko sets up six different satire stations around the room. Each station is designated a "crime scene" and students rotate from station to station in 10-minute segments. At each station, song passages or video clips provide clues as to the type of satire on display. Students collaborate in groups of four: One serves as recorder, another as head of investigation, and the final two play the role of forensics specialists whose job it is to identify clues as to the type of satire it might be. At each station, the group's task is to identify the correct type of satire, so the recorder can, after writing down the observations and clues, finish the task by recording the satire type.

Poclayko's role during this extended activity is to facilitate movement from station to station, and for this purpose, she uses music. Soft music plays during station visits, and near the end of the 10 minutes, she brings the volume up and then cuts it off. The groups then rotate to a new station, switching roles in the process. By so doing, everyone gets to serve as recorder, forensics specialist, and head of investigation. Poclayko circulates around the room, keeping track of the time and listening to the conversations.

Final Thoughts

At every grade level, movement can serve to enhance memory and cognition. It also gives students a chance to stand, stretch, and travel a short distance in the classroom in order to meet with a partner or group. The use of music makes it more powerful; and in my experience, students love moving, grooving, and dancing to an upbeat song. Music and movement serve as dynamic motivators and wonderful learning tools. The most successful of the hundreds of classrooms I have visited over the years take advantage of a student's desire to get up, move, pair, share . . . and learn from each other.

Schools and school districts that are cutting back on physical education or recess are moving in the wrong direction. "Given the powerful cognitive effects of physical activity," says Medina, "this makes no sense" (2008, p. 24). When doing horizontal or vertical planning at every level, teachers and administrators would do well to explore ways to increase opportunities for exercise. The best teachers I know use movement as a regular part of their classroom routine; administrators at every level need to encourage its use in the twin interests of health and cognition.

In Chapter 2, we'll look at the value of collaboration and student-to-student conversation. As we did in this first chapter, we'll look at some specific activities used by teachers at various grade levels around the country.