



# Preface

Educators today face numerous challenges as the umbrella of “No Child Left Behind” impacts the classroom environment and learning climate. What once may have been an experiential classroom, has become much more specific in its delivery of the curriculum, providing information that will enable students to test well. We have created classrooms in which we may be educating today’s children only from the neck up. With this approach, we may have missed providing a foundation for learning that includes the concept of body-mind-spirit.

Children cannot be broken into parts. It is still the whole child we need to educate even as the academic/cognitive piece is addressed through curriculum demands. What we may miss when we engage students in the three Rs is nurturing their spirits, self-images, and self-esteem as they navigate through their educational journeys. We have many times overlooked how the body needs to be cultivated. Numerous studies and research have indicated how movement and learning are connected and that students succeed when their bodies are activated in the educational process. *Gross Motor Fun* will provide you with the tools and techniques to not only engage students with the concepts of the three Rs but also address the development of their self-images and motoric abilities (gross and fine).

# Introduction

Movement is a natural part of being a child. Movement experiences should not be regularly scheduled and then disregarded; rather, movement experiences should be spontaneous in the classroom and integrated throughout the school day. Motor skill acquisition is the direct result of experience and practice. Without early opportunities to engage in active learning, many children, particularly children with special needs, begin school with inadequate motor skill development, and they do not acquire these motor skills through “natural” experiences later on in life. In addition, young children, as well as children with special needs, can learn through their movements and play—through being active. Activity lays the foundation for essential learning skills, which, in turn, affect a child’s ability to read, write, and think.

Movement programs are vital, not only for the improvement of health-related fitness and motor skill development, but also for the development and enhancement of self-esteem and self-confidence, thereby enriching the psychological well-being of students. Early movement experiences have the potential to greatly enhance a child’s self-image because movement experiences are so personal and because success depends so much on one’s own skills and abilities. For this reason, it is critical that teachers, paraprofessionals, and parents provide positive reinforcement, and lots of it, when children attempt movement activities.

Movement programs can also provide students with vital recreational experiences. Programs assist students to use their leisure time in a satisfying and constructive manner, thereby opening doors for their fuller participation in society as adults.

Movement activities engage the whole body and address developmental concepts of laterality and directionality. Incorporating movement on opposite sides of the body, such as crawling, hand over hand climbing, and moving on a balance beam and/or outdoor playground equipment, stimulates the above concepts and has strong impact on reading and writing skills.

Gross motor skills develop before fine motor skills, and teachers need to work on strengthening the upper body and core before they can expect the hands and fingers to be well coordinated. The amount of time children are required to sit at their desks or tables emphasizes the need for gross motor development even more.

Children learn from the concrete to the abstract, and the body provides the most concrete experience available for motor planning and organization. Exploring movement creates an arena for the child to learn new ways to move and then to integrate those movements into a planned motor act. Moving freely with little structure from verbal cues and environmental restrictions, children need to be able to control their bodies in space before they can organize words and numbers on a page. The body in space movements of young children are critical for providing a base and foundation for future desk work.

Movement experiences, as indicated through studies and research, have an impact on the social and emotional development of young children. When engaged in developmentally-appropriate gross motor activities, children succeed; this success fosters the social and emotional makeup needed for human development.



# Movement and Learning

It is generally understood and accepted that physical activity can impact not only a child's physical development, but also the child's social and emotional development. Often, however, no connection is made to how physical activity can enhance a child's cognitive development. Educators need to understand the link between physical activity and learning. Here are some facts supported by numerous studies and research:

## **Athletics and Learning:**

- As a group, students who participate in interscholastic athletics tend to perform better academically (GPA) than students who do not participate.
- Athletes in general tend to perform better academically during their sports' seasons.
- Athletes who participate in two or three sports tend to perform better academically than athletes who participate in only one sport.

## **Physical Activity's Effect on the Brain:**

- The cerebellum (the part of the brain that processes movement) has clear pathways to the parts of the brain involved in memory, attention, spatial perception, language, complex emotional behavior, and decision making.
- Exercise increases both the number of connections among the brain's neurons and the number of capillaries around them.
- Exercise triggers the release of natural chemicals that boost the ability of neurons to communicate with each other, thus enhancing cognition.
- Exercise also triggers the release of natural chemicals that stimulate the brain's pleasure centers thereby decreasing stress, increasing self-esteem, enhancing a sense of purpose in life, and improving attitude in school.
- Vigorous aerobic exercise improves short-term memory, reaction time, and creativity.
- Children engaged in daily physical education or athletics show superior motor fitness, academic performance, and attitudes toward school when compared to their counterparts who do not participate.

## **The Physical Activity and Cognitive Development Connection:**

- One Canadian study showed academic scores went up when one-third of the school day was devoted to physical education.
- Another Canadian study demonstrated that children who participated in five hours of vigorous physical activity a week had stronger academic performances in math, English, natural sciences, and French than did children with only two hours of physical activity per week.
- A study of third-grade children participating in dance activities showed an improvement in their reading skills of 13 percent over six months, while their peers, who were sedentary, showed a decrease of 2 percent.
- In France, children who spent eight hours a week in physical education demonstrated better academic performance, greater independence, and more maturity than students with only 40 minutes of PE a week.
- A study conducted by neurophysiologist Carla Hannaford determined that children who spent an hour a day exercising did better on exams than students who didn't exercise.
- Recent research demonstrates a direct link between fitness and intelligence, particularly in children under 16 and in the elderly.