

Linking the Classroom And the Gym

Presented by
**Head Start Body Start
Master Trainer**

Rae Pica

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Move Into Math coming in April

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WE RETAIN:

- **10% of what we READ**
- **20% of what we HEAR**
- **30% of what we SEE**
- **50% of what we HEAR & SEE**
- **70% of what we HEAR, SEE, & SAY**
- **90% of what we HEAR, SEE, SAY, & DO!**



Confucius said: “What I hear, I forget. What I see, I remember. What I do, I know.”

COGNITIVE DEVELOPMENT

- Earliest learning based on motor development
- Correlation between body space awareness & paper space awareness
- Problem solving/creative- & critical-thinking skills
- Learning by doing
- Address various learning styles & multiple intelligences
- Movement across the curriculum!

ART

Concepts like shape, size, spatial relationships, and line are part of both art and movement education, as is self-expression. Whenever children arrange their bodies in the space around them, it can be said they're exploring artistic as well as physical concepts.

Exploring Shapes

- Begin with simple comparisons between straight and round. Show the children straight objects (e.g., rules, the lines on ruled paper, etc.) and round objects (e.g., a ball or a globe); ask them to create these opposite shapes with their bodies.
- Ask the children to form bridges and tunnels with their bodies or body parts.
- Play a mirror game by facing the children and creating different shapes and challenging them to match each shape as though they were your mirror reflection.
- When the children are developmentally ready, ask them to show you how wide, narrow, crooked, pointed, angular, long, and short they can be. Can they look like a table? A chair? A teapot? A pencil? A rug?
- With older children, explore the possibilities for symmetrical and asymmetrical shapes.

Exploring Line

Use a jump rope or something similar to demonstrate the differences among vertical, horizontal, diagonal, curved, and crooked lines. Can the children use their bodies to replicate the line created with the rope?

Shapes and Colors

- Shapes and colors can be explored in tandem by providing pictures or examples of objects in various colors (e.g., a yellow banana; a red apple; a green plant) and asking the children to demonstrate the shape of each object.
- An alternative is to mention a color and ask the children to show you what it brings to mind. The children can then either take on the shape of the objects mentioned or become them (e.g., if the color green reminded some children of frogs, they could depict the movement of frogs).

Exploring Texture

Gather items of various textures (e.g., rope, satin, burlap, feathers, a beachball, a stuffed animal, a carpet square) for the children to see and feel. Talk to them about how each item feels or *makes them feel*. Then ask them to demonstrate through movement.

LANGUAGE ARTS

Movement, like language, plays an essential role in life and is also a form of communication. Thus, the two are naturally linked.

Making Letters

Ask the children to form letters of the alphabet with their bodies or body parts – individually or with a partner. This leads to greater awareness of the straight and curving lines that comprise each letter and the difference between upper- and lower-case letters.

Dramatization

Acting out fairy tales and nursery rhymes increases the children’s comprehension and helps them recall the order of events. Nursery rhymes like “Jack and Jill,” “Humpty Dumpty,” and “Jack Be Nimble” (which also provides practice with jumping) are perfect for dramatization, as are such classic tales as “Jack and the Beanstalk,” “Henny Penny,” “Hansel and Gretel,” “The Three Billy Goats Gruff,” and “Goldilocks and the Three Bears.” Children’s stories like “The Little Engine That Could” and, more recently, “Rosie’s Walk” are among those that also lend themselves to movement.

Word Comprehension

- Acting out the meaning of individual words from stories and poems can lead to greater understanding. Through movement, children can begin to comprehend suffixes and, thus, the distinction between words like *frightened* and *frightening*.
- They can better grasp the meaning of action words like *slither*, *stalk*, *pounce*, or *stomp* – or descriptive words like *graceful*, *smooth*, or *forceful*.
- Preschool children can work in pairs to demonstrate the meaning of simple opposites like *sad* and *happy*, or *up* and *down*.

I’ve Got Rhythm

Rhythm is an essential ingredient in both words and movement. So when children clap the rhythm of words or rhymes, or move to the rhythm of a poem, they’re increasing their knowledge of both rhythm and language. Clapping, stamping, or stepping to the rhythms of words can also familiarize them with syllables.

MATHEMATICS

Eva Essa, author of *Introduction to Early Childhood Education* (Albany NY: Delmar, 1992) writes: “The foundations of math are grounded in concrete experiences such as the exploration of objects and gradual understanding of their properties and relationships. The cognitive concepts...of classification, seriation (ordering), numbers, time, and space all contribute to the gradual acquisition of math concepts.”

Quantitative Concepts

The following list of quantitative ideas should be part of the children's daily lives:

big and little	together
long and short	same length
high and low	highest
wide and narrow	lowest
late and early	longer than
first and last	bunch
middle	group
once	pair
few	many
tall and short	more
light and heavy	most
	twice

Physical activity can help children attach meaning to these words!

Positional Concepts

Positional concepts can be demonstrated by asking the *first* or *last* child in line to perform an action. You can ask children to stand *in front of* or *behind* a person or object, or *between* or in the *middle* of others. Props and obstacle courses are excellent for demonstrating such positional concepts as *over*, *under*, *around*, and *through*.

Number Awareness

- Children can form the shapes of numbers with their bodies or body parts. To begin, assign numbers they must replicate, challenging them to try it at varying levels (i.e., standing, kneeling, sitting, lying).
- When the children are developmentally ready, you can ask them to choose numbers, say, between zero and four or five and nine.
- You can ask them to form the shapes of numbers with jump ropes and to trace those shapes with locomotor skills.
- Challenge them to show you their ages with their bodies, to form numbers in pairs or trios, or to draw invisible numbers in the air or on the floor with different body parts. Can their classmates guess the numbers drawn?

Counting

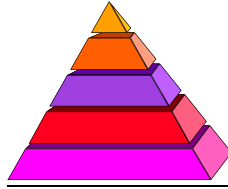
- Help children develop an understanding of counting by counting the number of beats clapped (e.g., clapping and counting 1-2-3 and asking them to echo); steps taken (giving the class a number and asking them to take that many steps or hop that many hops); or repetitions performed (asking children to repeat a movement two more times).
- Ask children to place a certain number of body parts on the floor or to balance on so many parts.

- Challenge them to count the number of times they're able to bounce a ball, the number of seconds they can hold a static balance, or the number of ways they can find to move the head, for example.

Simple Geometry

Simple geometry includes straight, curved, vertical, horizontal, crossed, and diagonal lines, as well as circles, squares, triangles, and rectangles.

The children can form lines, curves, points, and angles with their body or body parts and later advance to forming geometric shapes – alone or with others, at various levels in space. They can move in straight, curving, circular, zigzag, and diagonal lines and advance to moving in square, rectangular, and triangular patterns on the floor.



Simple Computation

- Computation is much less abstract when human bodies are used for addition and subtraction. Acting out the song “Roll Over” (“there were ten in the bed, and the little one said...”) makes subtraction very clear – and lots of fun.
- By asking one child to stand at the front of the room and then adding (later subtracting) one child at a time, you can help children learn both processes.
- Similarly, when three bodies are lying on the floor and one rolls away, it's quite easy to see three minus one leaves two.

SCIENCE

Science is about exploration, investigation, problem solving, and discovery -- as is a child's whole life, from its very beginning. In other words, science for young children is learning by doing -- just as movement is.

The Human Body

- Any time children perform movements, they are learning something about the functions of the human body. However, you can be more specific simply by focusing on certain functions. You can ask them to concentrate on the muscles, for example, by suggesting they think about the amount of muscle tension used to perform a movement, or the shape of the muscles when they freeze in different positions.
- Relaxation exercises that require the children to contract and relax the muscles are also excellent for developing an awareness of these important body parts.

- Relaxation exercises focusing on the breath can create an awareness of the lungs.
- You can introduce the function of the heart by asking children to find their pulse at rest and after strenuous activity. Can they match their pulse's rhythm with the tapping of a hand or foot?
- Listening activities focus on the sense of hearing. Asking children to try various nonlocomotor skills with their eyes closed draws attention to the sense of sight. The texture activity suggested under Art can be used to concentrate on the sense of touch.

Nutrition

- Ask children to demonstrate with faces or bodies how various flavors and odors make them feel.
- Challenge the children to take on the shapes of various fruits and vegetables.
- Ask them to show you the difference between, say, an apple hanging from a tree and applesauce simmering on the stove.

Animals

Animals are tremendously appealing – and therefore relevant – to young children. Moving like different animals can contribute not only to knowledge about them but also to the development of empathy and a proficiency with various movement skills and elements. It's not enough, however, to merely ask the children to pretend to be different animals. You must create a greater awareness by discussing pertinent characteristics of the animals they are to portray. Cats, for example, can move very slowly and quietly. What is it about the way they use their muscles and paws that makes this possible? What is it about their spines that makes them able to twist, stretch, and arch so easily?

Scientific Concepts

- Flotation. Children can watch bubbles, feathers, and chiffon scarves drift through the air and then attempt to simulate the movement. Does floating require light or strong movement? Little or much muscle tension? Is it possible for humans to really float? No – because of...
- Gravity. When we jump, hop, or leap in the air, the force of gravity pulls us back down, just as it pulls down any object (e.g., a beanbag or ball) we toss in the air. But the higher we toss the object, the longer it takes to reach the ground. Challenge the children to discover how many times they can clap or turn around before the beanbag or ball returns to their hands or to the ground.
- Balance. Challenge the children to balance on their knees or seat, lean in any direction as far as they can before falling over, and then return to their original position. This is called balance and recovery.



*Snowflakes drifting from the sky,
Dancing lightly in the air.
Falling, falling without a sound;
Each is unique and rare.*

*Snowflakes swirling in the wind
In a dance they can't control
Higher, lower, around and 'round
Shivering in the cold.*

*Snowflakes landing on the earth
Melting quietly from sight.
Falling, falling until the ground
Is blanketed in white.*

from *Wiggle, Giggle, & Shake: 200 Ways to Move & Learn* by Rae Pica (© 2001)

SOCIAL STUDIES

Lessons in social studies for young children begin with the children themselves – because that’s where their world begins. Self-concept, therefore, is a logical starting point in the early childhood social studies curriculum. The child’s world then extends, respectively, to family, friends, neighborhood, and the community in general.

Self-Concept

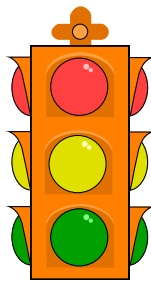
- Activities in which children pretend to walk as though sad, mad, proud, scared, tired, or happy are a good place to start because they give the children permission to express themselves. Children can also show you with their hands or faces alone how these emotions look.
- Songs like “If You’re Happy” can get children thinking about their feelings, especially if you add other emotions to the lyrics.

Holidays and Celebrations

Holidays and celebrations offer a multitude of images that inspire movement. Children can move like black cats and ghosts at Halloween, flickering flames and melting candles at Hannukah, elves and reindeer at Christmas, and on and on.

Occupations and Transportation

- Ask children to demonstrate the actions performed by people in different occupations: a chef, police officer, hair stylist, homemaker, musician, dancer, or carpenter.
- Because transportation is specifically about movement, there’s no lack of ideas for matching these two fields. To make problem solving part of your exercises, ask children to think of and depict modes of transportation found mainly in cities, on water, and in the sky, or ones that are motorless.
- Introduce the children to traffic lights by playing a movement game with three sheets of paper – one red, one yellow, and one green. When you hold up the green sheet, the children walk. They walk in place when they see the yellow sheet and come to a complete stop when you hold up the red.



COOPERATIVE GAMES & ACTIVITIES

Partner Activities

Mirror Game

Participants pair off and stand facing each other. One partner performs a series of simple movements (standing in place), which the second partner mirrors. After a while, the partners reverse roles. The object is not to try to trick each other but to resemble a mirror reflection as closely as possible.

Shadow Game

Similar to previous activity, but one partner stand with his or her back to the second partner and performs various movements that the latter “shadows.” These movements can be performed in place or can move throughout the room. Again, partners eventually reverse roles so both have a chance to lead.

Lightning & Thunder

Children take partners and decide who is first going to be lightning and who is first going to be thunder. At signal, partners separate and begin moving about the room, keeping their eyes on one another. The partner acting as lightning will periodically “strike” (move like lightning). And, since thunder is the sound that follows lightning, the partner acting as thunder will then respond by moving in a way she or he feels depicts thunder. After a while, partners reverse roles.

Switcheroo

Partners stand back to back until the leader calls out body parts (e.g., *hands* or *elbow to knee*). Partners then quickly turn, bring together the appropriate body parts, and immediately return to their back-to-back position. The game continues in this manner until the leader calls out “Switcheroo!” Partners then separate and get back to back with a new partner.

It Takes Two

This activity requires partners to connect various body parts, which you assign, and to discover how many ways they can move while remaining connected. You can ask the children to connect one or both hands, elbows, knees, or feet. Backs and bottoms are possibilities, too.

Footsie Rolls

Participants pair off and lie on their backs with the soles of their feet together. The object is for partners to roll over without their feet breaking contact. See how far they can get while still connected!

(more on next page)

Group Activities

Pass a Face

The children sit in a circle and one child begins by making a face that is “passed” to the child to his right or left. That child makes the *same* face and passes it along in the same direction. When the face has been passed all around the circle, the process is repeated, with a different child beginning and a different face.

Pass a Movement

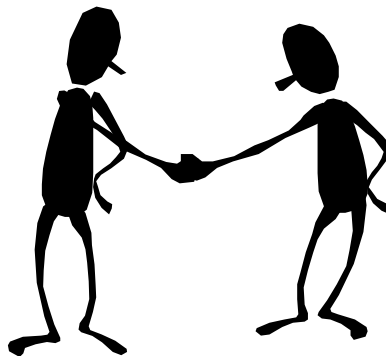
Similar to above, only the children form a standing circle and pass an *action*. The first child might, for instance, bend at the waist and straighten. Each child in succession must then do the same.

Pass a Beat

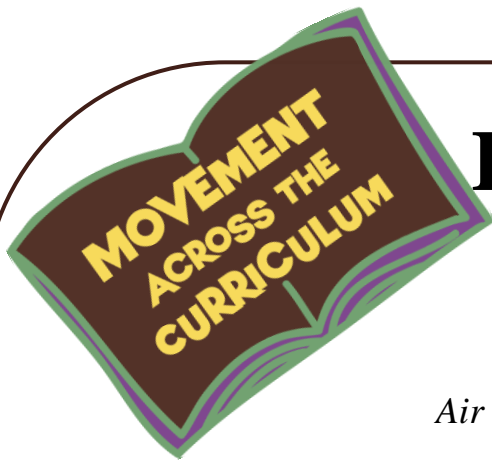
The first child claps out a rhythm (e.g., 1-2-3 at a moderate tempo). The object is for each child in the circle to repeat the rhythm *exactly*, keeping an even tempo all the way around. Even the interval between each child should be in keeping with the rhythm being passed.

Group Balance

The children form a standing circle and place their hands on the shoulders of the children beside them. They must then maintain a steady balance through challenges to stand on only one foot, lean in various directions, rise on tiptoe, etc.



- Grineski, S. *Cooperative Learning in Physical Education*. Human Kinetics, 1996.
- Kohn, A. *No Contest: The Case Against Competition*. Houghton Mifflin, 1992.
- Orlick, T. *The Cooperative Sports and Games Book: Challenge without Competition*. Pantheon, 1978.
- Orlick, T. *The Second Cooperative Sports and Games Book*. Nasco, 1982.
- Sobel, J. *Everybody Wins: 393 Non-competitive Games for Young Children*. Walker & Co., 1984.



Books that Move You

Skip Into Science

Promote early science skills and movement at the same time.

Read these books and ask the children to act out the concepts.

Children will move to the words in a variety of creative ways.

Air Is All Around You by Franklyn M. Branley

Dinosaur Stomp! By Paul Strickland

Bubble Bubble by Mercer Mayer

Can Snakes Crawl Backward? By Melvin & Gilda Berger

The Caterpillar Fight by Sam McBratney

Floating in Space by Franklyn M. Branley

From Head to Toe by Eric Carle

My Five Senses by Aliko

Gravity Is a Mystery by Franklyn M. Branley

Jump, Kangaroo, Jump! by Stuart J. Murphy

Monkey See, Monkey Do by Marc Gave

Over in the Ocean by Marianne Berkes

Over in the Grasslands by Anna Wilson and Allison Bartlett

The Reason for Seasons by Gail Gibbons

Temperature by Melissa Gish

You Can't Smell a Flower with Your Ear! By Joanna Cole