

# CREATIVITY CUBED: UNBLOCKING THE BARRIERS TO INGENUITY

.....By **Stacey Wellman, MA**

**THE KINDERGARTNER** took the wooden box, two inches on a side, flipped it over and slid out the lid. After lifting off the container, eight tan cubes of wood stood in perfect harmony.

She split them into two groups of four, and then four groups of two, calling out mathematical concepts as she went. “Two and two is four. Four and four makes eight.”

She gathered them into a single stack, then split them in different ways, noticing that a vertical cut and a horizontal cut were the same — four squares — yet different in shape.

But in the December light streaming through the classroom window, she looked at the blocks another way and noticed something else. By stacking a tower and surrounding it with other blocks, she could make a “Christmas tree with presents around it.” By making a pattern with all eight blocks, she could make “a snowflake.”

The confined box and rigid blocks led to unconfined imaginings. As she held the blocks in her hands, twisting them this way, looking at them that way, she saw not cubes of wood but mathematical concepts, stories, a connection to the seasons. In her hands, this 19<sup>th</sup> century educational toy, called Froebel “gifts,” is helping her to develop creativity, a critical 21<sup>st</sup> century skill.

The eight blocks in a box that entranced the little girl are part of a well-thought-out system of educational tools developed in the 1830s by Friedrich Froebel, a German scientist turned educator. He devised 10 “gifts,” or materials such

as blocks and yarn balls that always return to their original form after a child plays with them, and 10 “occupations,” or things such as modeling clay and origami, that the child modifies into new forms.

But in today’s high-pressured academic environment, where does play fit? And play with yarn balls? Folding paper plates to make a tetrahedral? More than one parent, teacher and administrator have cast one skeptical eye on the yarn balls while the other is more tightly focused on test scores.

And yet Froebel’s system of “gifts” and “occupations” is experiencing a rebirth in schools around the world, precisely because it fosters the kinds of character traits and learning habits needed today. The “gifts” are simple in design but allow for “deep exploration of spatial reasoning, analytical thinking, and creative design” by being “modular, logical, and multi-functional” (Bultman, 2000). The “occupations” are the complement, designed to enhance fine-motor activities and strengthen underlying neurodevelopmental processes necessary for higher thinking and learning.

By playing with both the gifts and occupations, children observe, plan, self-assess, and revise their ideas and thinking processes. They learn how to bring new ideas and perspectives to familiar material, looking more deeply and uncovering information not originally seen. Froebel’s impact has been far-reaching, with intellectual tentacles stretching into later educational movements,

including Montessori, Waldorf, Reggio Emilia and even progressive education.

College professors, business owners and government leaders say that fluidly reading by age five is not a determinant of adult success. Creativity is. Doing fifth grade math in first grade is not key to a thriving career in a “STEM” field. Conceptualizing new solutions for intractable problems is. Being first with an answer is not necessarily a sign of good problem solving. Looking deeper and incorporating different perspectives is.

Last year, a second-grader with impaired motor skills could not physically manipulate the Froebel blocks in his Winnetka classroom. He had difficulty with visual-spatial organization. But his verbal abilities exceeded his years, so he used his words to do what his hands could not: He directed his teachers in arranging the materials to match his ideas, and was open to peer suggestions. He struggled with the activity, but never tried to get out of it.

His participation was as integral to the group activity as anyone else’s, albeit executed differently. But it was propelled by the same force that drove every other child: an innate joy of learning that persisted in the absence of immediate success.

And so it was that when The Alliance for Early Childhood asked me to write an article, I knew exactly how to go about it. I studied my subject — and the cultivation of creativity — and considered the issue from many sides. I read, consulted with others and studied

children. I took a walk, letting my subconscious mull over the opening of the piece and how I would organize and condense a crushing load of information down to 750 words.

For a final bit of inspiration, I opened the cabinet housing the Froebel materials. I removed the box of eight tan blocks that the kindergarten child had used to build her “Christmas tree with presents.” With materials in hand, I knew how I wanted to begin. ●

*Stacey Wellman, MA is a graduate of Northwestern University. She completed her undergraduate and graduate degrees from the institution. Stacey has been a speech-language pathologist in the public schools for over twenty years. Outside of the public school, she runs a Roots and Shoots program and travels internationally with students, believing that learning must extend beyond the classroom and into nature.*

Stacey Wellman, MA is one of the national early childhood experts facilitating workshops at The Alliance’s 3rd Annual Preschool-Kindergarten Summit. Educators, save the date for this event to learn about the latest research relevant to children in the early years!

**PRESCHOOL-KINDERGARTEN SUMMIT**

**Tuesday, February 13,  
8:30am-3:15pm**  
Chicago Botanic Garden, Glencoe