MONTESSORI IN REDLANDS

Inspiring a Healthy Spirit, a Strong Character, and a Clear Intellect

BLUEBIRD BULLETIN

MARCH 2009 VOLUME 35, ISSUE 6

Reprint

It Figures: One Parent Learns the Practical Value of Math at *Journey & Discovery*

By Steve Wuhs, Assistant Professor, Department of Government, University of Redlands

For me, it was all about the binomial cube.

You remember: $(a+b)^2$, right? It's algebra, algebra that was drummed into my head so well that even after a good 20 years of mathematical atrophy I could still recall the solution: $a^2 + 2ab + b^2$. I was quite proud of myself for remembering, actually. That said, I was a little surprised to see the binomial cube in the *Elementary* room at MIR during Journey & Discovery, since I was pretty sure that I learned the binomial function in junior high. Even more troubling was that trinomial version, which I could not dredge up from my memory.

With a little assistance from my friend Kate, though, I figured out the trinomial cube, and in the process figured out something important about Montessori education. **It turns out that the binomial/trinomial functions actually have problem-solving value. Put into three-dimensional form, it actually helps one understand volume. Who knew?** And my son Teo, just turning four, is working on the 3-D puzzle now in Jean and Maryhelen's class—absent formulas and formalization, but the building blocks are there.

That was lesson number one about Montessori from Toddler through the Grove High School—that there are substantial and deliberate continuities among the levels of Montessori education.

The second lesson I took away from my day related to the marriage of logic, skills, and content. This was also evident in the binomial square, of course: Through it, students learn to manipulate objects, solve three-dimensional puzzles, compute volume, and represent volume in abstract, mathematical forms. The square is part of a continuum in how arithmetic is learned in Primary, how Elementary students learn geometry, and how science is used at the Farm. (I'm quite certain that my daughter Mara is encountering something similar in Liana and Kim's room—but I was on the upper tour while my wife did the lower tour.)

At MIR, we often hear about the centrality of the whole child to the Montessori education, and I certainly saw evidence of that holistic approach that Saturday. But what really struck me was that the model of education I discovered that day was so purposive: Disciplines informed each other, learning happened for a reason, and students were encouraged by environment and teachers alike to uncover what they wanted from their educations.