



Kay Boltie

In the *Real World*, Algebra and Geometry are Married!!

Streamline the teaching of middle school math by integrating topics of algebra and geometry.

*A 2-day workshop for middle school mathematics teachers of grades 5 through 8, special education teachers, and math curriculum specialists who want students **to make valuable connections** that finally make sense to them!*

As the mathematics curriculum continues to expand into the 21st century, the responsibilities of the teacher get more broad and more demanding. **It is time to streamline!** This workshop is an excellent opportunity to learn powerful strategies to incorporate geometric thinking into algebraic ideas. Your classroom atmosphere will become more exciting as students see valuable mathematical *and* real-world connections!

By weaving geometric ideas throughout all middle school math, but especially algebra, you will not only promote your students' understanding of the math you are teaching, but you will also lay the foundation for their success in formal geometry. The activities presented in this workshop are designed to meet the needs of *all* students and are, in large part, self-correcting. If you want to introduce some fun into the daily routine and desire to "trim the fat" from the curriculum, then this workshop is for you.

Through humor and classroom-tested strategies, the presenter will **model and provide information and activities to assist you in consolidating lessons** which are rich in content, yet accessible to a wide range of student abilities. You will leave this workshop with ready-to-use activities that will enable your students to enjoy and better understand algebraic and geometric concepts. Make more content seem like less work!

In This Workshop You Will Discover:

The importance of math vocabulary:

- Listening skills
- Teaching math vocabulary concretely
- Fun and easy vocabulary practice

Some typical student difficulties:

- Visualizing
- Interpreting drawings
- Drawing 3-D figures in 2-D space

The use of manipulatives:

- Student-made manipulatives
- Staying organized
- Being concrete in math

Problems with Formulae:

- "Plugging in the numbers" doesn't help
- Meaning *does* matter

Some common misconceptions students have about:

- Right angles vs. "left" angles!
- Solid figures
- Rotations, translations, reflections
- Parts of plane and solid figures

Middle school algebraic and geometric connections, incorporating:

- Problem solving
- The importance of visual memory
- Properties of plane figures
- Perimeter, area, surface area, and volume
- Pythagorean Theorem
- Parallel lines and transversals
- Translations, rotations, and reflections
- Graphing calculator usage
- Slope
- Solving systems of equations
- Completing the square

Why proof is so difficult for students:

- Proof readiness
- Proof for young students
- Informal proof in algebra and geometry

Other important "goodies":

- How humans see
- How experiences affect "learning to see"
- Ways to show the importance of math in real life
- How to get "skill practice" into the available time
- Teacher and student background considerations

Celebrate the union of Algebra and Geometry with new and stimulating activities.

Prime Presentations
(888) 917-3950

Mathematics
Grades 5-8
2 Days