Critical Areas of Focus for Mathematics Grades 6 - 8

Grade 6

Apply previous experiences with multiplication, division, and fractions to develop understanding of rate and ratio as well as completing concepts concerning dividing fractions

**Expand student's understanding of the number system with the introduction of negative integers
and
introduce algebraic expressions and equations**

Develop statistical thinking

Grade 7

Build on previous experiences with ratio to introduce proportional relationships and apply this understanding to scale drawings

Apply student's knowledge of the four basic operations and inverse relationships to rational numbers and solve linear equations

**Solve problems with two- and three-dimensional figures, area, surface area, and volume
and
draw statistical inferences from sample populations**

Grade 8

**Apply previous experiences with linear expressions and equations to extend to systems of equations
and
use this understanding to represent, analyze, and solve a variety of problems**

Build on student's experiences with linear equations to introduce the concept of function as a description of a relationship where one quantity is determined by another

Investigate the geometric concepts of similarity, congruence, and the Pythagorean Theorem

The Standards for Mathematical Practice

1. Make sense of problems and perservere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

The Standards for Mathematical Practice describe "how" students should interact with the "what" of the content standards. Teachers **must** *integrate these standards into their daily lessons carefully selecting those practices that connect to the content.*