

Math Goals

- The major developmental themes for math.
 - Grades 1-4: Developing a sense of number & Arithmetic Facts
 - Grades 5-6: Consolidating procedural skills
 - Grades 7-9: Developing abstract thinking
 - Grades 10-12: Developing higher-level thinking (critical, analytical, synthetic, etc.)
- What do Students really Need to be Prepared for their Future Math Studies?
 1. Enthusiasm for learning math.
 2. Mathematical thinking
 3. Solid basic skills. This is a relatively short list (see below).
- The Necessary Basic Skills.

These are the skills needed to be mastered by the end of...

 - Fourth Grade: Arithmetic facts learned “by heart”; Sense of Number.
 - Sixth Grade: All procedural skills, including: Fractions, Decimals, Measurement, Estimation. Vertical Arithmetic (long division, long multiplication, etc.)
 - Eighth Grade: Percents, Ratios, Basic algebra (not too much!), Area and Volume, Dimensional analysis (i.e., unit conversions).
 - Twelfth Grade: Algebra fundamentals, Cartesian geometry, Trig, Logs, Functions.
- But let’s not forget our “Biggest Goal”: Avoiding Math Trauma.
 - Being “math healthy” includes:
 - Being open to problem solving, puzzles, and trying to figure it out.
 - Determination to improve even if math is hard for you.
 - A curiosity to learn new things.
 - A desire to understand “why”.
 - A recognition that mistakes are a necessary part of learning math.
 - Being OK with confusion.