

Chapter 9 Standard Math Curriculum, SMC.

What I call the “Standard Math Curriculum, SMC” has evolved over the 20th Century until today and essentially consists of the following.

Math Education has been compartmentalized into several one year Courses, Algebra 1, Geometry, Algebra 2, Trigonometry, and Calculus.

Each of these courses usually comes with a large expensive book that has evolved over the decades right up to the present time.

Each of these books has been loaded up with a lot of premature theoretical materials, and a lot of obsolete manual algorithms. This varies from book to book, but if a book in any one of these subjects is over fifty pages long, this is probably true. How much do all of these books cost?

Compare this with Dr. George Simmons book, *PreCalculus Mathematics in a Nutshell, Geometry, Algebra, Trigonometry* which is 119 pages long and costs about \$15 on Amazon.

<https://www.amazon.com/Precalculus-Mathematics-Nutshell-Geometry-Trigonometry/dp/1592441300>

This book was written in 1987. If a high school graduate knows all of the math in this book, I would be impressed. Check it out!

When I use it in Tiers 3 and 4 I do add some materials such as Complex Numbers and, most importantly, the use of the incredible 21st Century Tool, Wolfram Alpha, which revolutionizes how one learns and practices STEM Math.

<https://www.wolframalpha.com/>

Now, as you learned in Chapter 2, I believe all students should first be taught the basic Concepts of Algebra, Geometry, and Trigonometry along with the first modern Tool, the Scientific Calculator. We use the TI 30Xa, and then the student can easily learn any other Scientific Calculator.

<https://www.amazon.com/Texas-Instruments-TI-30XA-School-Calculator/dp/B0034HJNWC>

I buy them at Walmart for less than \$10.

The One Question “Test” I use is to have the student calculate the Area of an arbitrary triangle using the Scientific Calculator.

Once a student has completed Tiers 1 and 2 and Quantative Reasoning the student is ready for the Military or and Apprentice Program or a Tech School. This usually takes about one year or less.

Ask if your Public School does this. Very few do. Congratulations to any one that does!

I recommend that any Parent, or Teacher, read the Preface and Introductions to the three Chapters in Dr. Simmons book. This pretty much explains what is wrong with the Standard Math Curriculum.

Algebra and Geometry really should be taught together.

This sometimes happens if the school is teaching what is called Analytical Geometry by the 11th grade. But, it is usually getting students ready for STEM.

Our program teaches this in Tier 4 too, for STEM students.

In Tier 3 we teach any college bound student math needed for one of the standardized tests like the SAT or ACT.

Finally, ask what your school is doing to get its students who are interested in some STEM subject ready.

Are they teaching the obsolete Manual Tools for Algebra and Calculus, or a modern 21st Century Tool like Wolfram Alpha?

Even if a school is using some modern technologies like Chrome Books and online learning, it won't help much IF it is not teaching the right Math Topics in the right order.

So, what I would examine in any school is are they using some form of SPIKE Pedagogy I explained in Chapter 1. If so, are all five of the ingredients being satisfactorily delivered.

Then, I would examine the books they are using. If they are using large expensive books this is a huge red flag.

Unfortunately, this is what many states mandate.

One thing you can do is use our Syllabi for our Six Tier Program and compare it to the Syllabi of your school's math program.

Remember, this is NOT a criticism of the math teachers. They are 'victims' of the SMC just as much as the students are.

Actually, it's not really the fault of the school's Administrators or even the School Board. They, too, are victims of their State's Standards which are essentially established by the Math Education Leaders.

Unfortunately, our current Standard Math Curriculum is the result of an “evolutionary” process over the last two hundred years, and not “intelligent design” utilizing modern technologies and asking just what a modern math student needs to know, if you'll pardon the analogy.

I've been watching it for about 65 years now. See Chapter 10 for how it is ruining our Public Schools.

So sad.

Hopefully, the Homeschool Community can lead the way to a revolution in our Public Schools Math Curriculum and Delivery Systems.

In a Nutshell, as Simmons might say, just compare our Six Tier Syllabi to your Public School's Syllabi.

Also, compare their Delivery System Pedagogy to our SPIKE Online System.