Why Singapore Math?

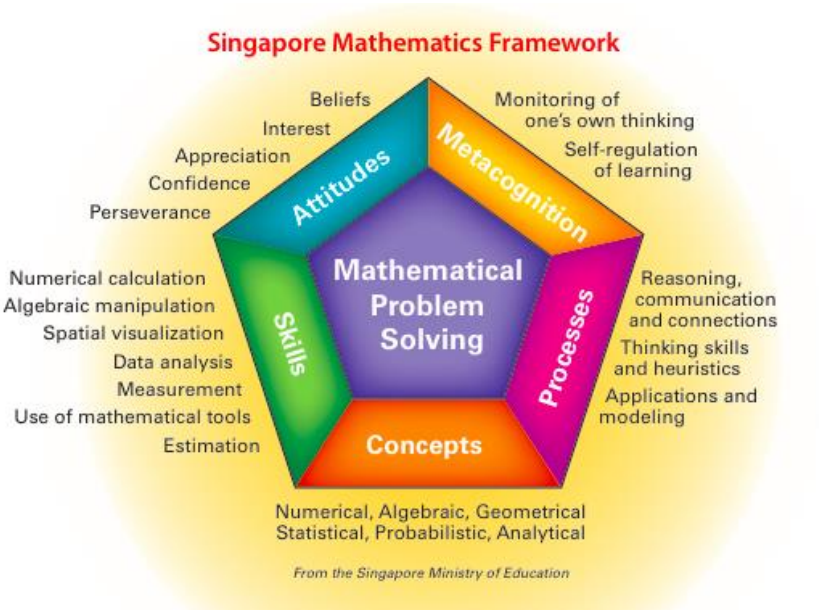
By: Bob Schaffer, Principal LCHS

Years ago, when Liberty wanted to build a second-to-none math program, the school's Board of Directors didn't ask which school, which school district, or which state teaches math the best. No; it pursued the best math program on the entire planet.

This quest acquainted Liberty with the research and conclusions of Liping Ma about why Chinese students consistently outperform American ones. Ultimately, this led us to Singapore Math.

Liberty Founder Dr. Randy Everett spoke about Liberty's attraction to Singapore Math at his recent Liberty Lecture entitled, "A Classical Framework for Teaching Thinking."

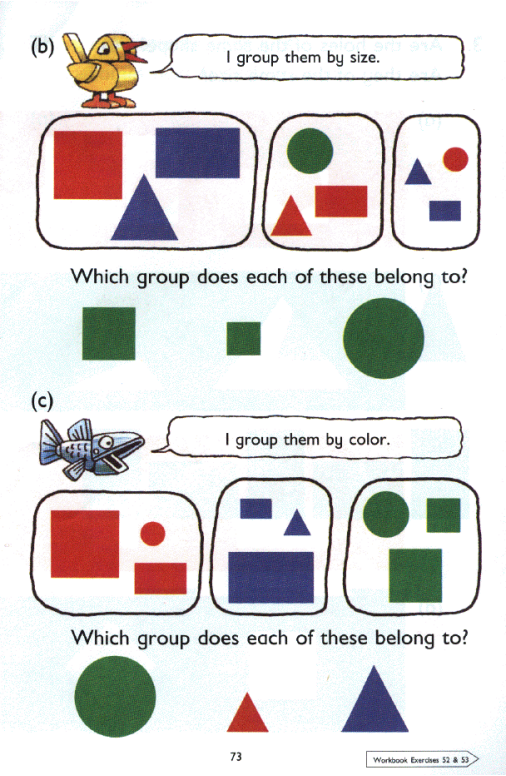
The conceptual strategies of Singapore Math align perfectly with Liberty's philosophy wherein we declare as school policy "it is not enough to assert something is true, instead teachers (and students) must be able to prove why something is true every step of the way, based on concepts the students already know and understand."



Singapore Math has given our students, in the earliest grades, the firmest advantages of a strong mathematics footing. The curricular strategy takes children through five process priorities which nicely track Liberty's "Thinking Framework:" Skills, processes (problem-solving strategies), metacognition (monitoring one's own thinking, assessment, and multiple approaches to problem solving, etc.), concepts, and attitudes (appreciation, confidence, perseverance).

At Liberty, repetition, memorization, math facts, homework and frequent assessment are embraced. We see great benefits in developing math automaticity.

We reject the common American public-school practice of "math discovery." Rather, we favor direct instruction.



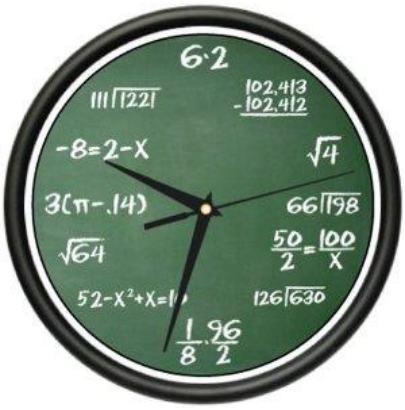
Singapore Math is used at Liberty through the 7th grade. This sets a sturdy foundation for junior-high and high-school math.

Liberty differs from most junior-high and high schools in that we seek to maintain a conceptual and skill-based approach to Algebra I, Geometry, and Algebra II.

With the introduction of the National Council of Teachers of Mathematics Standards in 1989 and the proliferation of the new nationalized Common Core Standards, more and more American schools are taking an "integrated" and discovery-based approach that attempts to introduce concepts by prompting a student's natural curiosity.

The approach tends to deemphasize the rigor of assigning students homework on a nightly or even regular basis. While the integrated approach can be sound, the actual implementation in America has more often regrettably defeated its own purpose.

For example, math education in the U.S. tends to become suffused with various non-math objectives in an attempt to relate prevailing math-free dogma to math. As a more reliable approach, Liberty believes arming the student with algorithm-based math (which is indeed more difficult to learn) better prepares her and him for the college-level work they'll be expected to undertake after moving on from high school.



Stringing together a conceptual approach inherent with Singapore Math, plus skill-based automaticity, plus mastery of the traditional algorithms gives our students a relevant and powerful advantage for college – and for living the good life. Moreover, we find this strategy actually equips the student with multiple approaches to solving problems.

It broadens one's reasoning capacity. We believe Liberty's policy

makes sense – especially in the broader sequence of Core Knowledge followed by a focused college-preparatory high school – regardless of whether the student pursues a math-dependent major in college.

Mathematicians **Alice Crary** and **W. Stephen Wilson** lay out an excellent argument and justification for this philosophy in a *Wall Street Journal* article they jointly penned on the topic. Their findings are offered within the context of understanding how new nationalized "Common-Core" standards are warping public-school strategies for mathematical education, and suggesting what serious schools ought to do to maintain more prudent math objectives.

As parents committed to directing the education and upbringing of our children, we are naturally drawn to higher, research-based, internationally benchmarked goals for our math students. It is important for everyone associated with Liberty to understand and support the school's math policy, especially now as Colorado and most other states are swept by faddish experimentation.

Liberty Common was among the first schools in America to discover and import Singapore Math. We have played a leadership role in perfecting its implementation in the U.S., and empowering our students with a truly world-class and internationally benchmarked math strategy.

Singapore Math works for Liberty students. The results speak for themselves.