

# North Cross School transitions to Singapore Math

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Lower School math teachers at North Cross School attended numerous training sessions this summer in preparation for the launch of Singapore Math® this fall. While not common in public schools, this program has been implemented at some of the best independent schools across the country with remarkable success. Recently St. Anne's-Belfield School in Charlottesville, VA made the switch as well as several schools in the Richmond and D.C. areas. North Cross is the first school in the Roanoke Valley to fully implement this program for its students.

Singapore Math is a conceptual-based program that first came to the United States from Singapore in 1998. Teachers in Singapore use the program and their students rank at or near the top on international math exams. On the surface, the pace of the program appears to be slower than a traditional math curriculum. However, the process promotes a deeper understanding of math concepts. As a result, students are more confident in their abilities and learn to master mathematical concepts by following a three-step process: concrete, pictorial, and abstract. The concrete stage is a hands-on approach that allows students to learn using different objects, such as cubes and blocks. In the pictorial stage students use pictures and graphs to help visualize concepts; and the abstract stage allows them to actually use mathematical symbols and algebraic expressions to solve problems.

Beth Curran is the Mathematics Department Chair in the lower school at St. Anne's-Belfield in Charlottesville and led the training at North Cross School. When asked about their conversion to Singapore Math she said "during our first year of implementation our students were saying 'I understand math now.' One of our second grade teachers commented, 'At this point in the year (first trimester), I have never had students with such a solid understanding of place value.' Upon conclusion of our first year, our math team felt that our students' problem solving skills made huge leaps. We also noticed that students were persevering through difficult problems that in the past (or even the beginning of the year) they would have given up on. We didn't teach perseverance, necessarily, but concluded that because students were learning and practicing skills to mastery that it equipped them with the tools to tackle challenging problems. They always had a place to start."

North Cross math teacher, Kate Clark, says "I'm excited to teach Singapore Math this year. Although there are fewer concepts taught, the concepts that are introduced are reviewed much more thoroughly than a traditional math program. The goal is to show students that there are multiple ways to solve problems, which will allow them to fully understand concepts. The focus is not on rote memorization skills like  $2 + 2 = 4$ . By following the Singapore Math program, our students will understand why  $2 + 2 = 4$ ." Kate has eight years teaching experience in public schools; this will be her first year at North Cross School.

“Singapore Math offers a developmentally appropriate approach to math that just can’t be replicated in an environment focused on rote memorization and end of the school year testing. In an independent school environment, I have the flexibility introduce new concepts, as students are ready for them. This creates a classroom where students build a real foundation for learning and are focused on mastering concepts before moving on the next concept.”

Lower School Director, Deborah Jessee, believes that “a strong education in lower school builds a foundation of lifelong learning. It lays the pathways, creates excitement, and energizes students for the future. Singapore Math is a great way to enhance our lower school academic program and teach children not to be intimidated by new concepts and that it’s okay to explore other ways of learning. They learn to not be intimidated by a complex problem. When a student understands how to break down a problem and can figure out how to solve it, that academic skill translates well to other subjects and helps them prepare for ACT and SAT testing down the road. Singapore Math just adds another tool to the toolbox of learning for our students.”

North Cross School is a college-preparatory day school grounded in a strong liberal arts and science curriculum combined with exceptional co-curricular programs. The academic program, from junior kindergarten through twelfth grade, prepares students to become responsible, successful citizens by encouraging them to explore their interests and develop their talents. The School is located at 4254 Colonial Avenue, Roanoke, VA, 24018. For more information, visit [www.northcross.org](http://www.northcross.org).

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