

“Math may be hard, but I can learn. Here is a pathway.”

By Viji K. Sundar
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For schools, Winter Break is no longer one-week to celebrate the holidays. Several schools have a three-week break. What is wrong with that you may ask? Research shows that while teachers return to school refreshed, students return with a loss of skills known as *slippage*. Many of them will return to the classrooms after three weeks and start the year with lower achievement levels than they had at the beginning of the break. What is alarming is the fact that the loss of skills is significant for math than reading.

Why does it happen? It is a well-known fact that learning changes the brain. According to UW-Madison Educational Psychology Professor Edward Hubbard, “Every time you learn something, there are nerve cells that are making connections...when you’re learning, you’re strengthening those connections in the brain at a microscopic level. But if you’re not using that information, over time those connections will weaken.” These weakened connections cause “Brain Drain.”

One way to break the cycle is to enroll your child in programs that are fun, interactive, and engaging to send them back to school with a learning mindset. Dr. Viji Sundar, Professor of Mathematics, has conducted math programs for K-12 students for over 30 years. Her recommendation for parents is to encourage their children to play board games, solve puzzles and riddles, and engage in math experiments to strengthen connections in the brain at a microscopic level.

How can your child develop fluency in math? All you need is a learning environment that is conducive to your child’s style of learning. Sundar S.T.E.A.M. Academy is the place to ensure that your child goes back to school with increased fluency and a positive attitude towards math.

The 2020 Winter Math Academy is for girls from 4th to 6th grade. The week-long Academy is a collaborative and interactive exploration of Multiplication, Division, and Fractions using manipulatives aimed at solidifying Pre-Algebra skills. The activities include playing board games and solving puzzles which are good for discovering big ideas and concepts behind the math they do in the classroom. In this Academy, there are no mind-numbing worksheets or drills but mindful play and guided discovery. The students develop a “can do” attitude to math as they explore and experiment. The discovery using the appropriate tools will unwrap the concepts and lead to understanding. The goal is for each participant to walk away feeling, “It may be hard, but I can learn do it.”

Are you thinking, “why should my daughter review Multiplication, Division, and Fractions?” Here is what Dr. Daniel T. Willingham says in the *Los Angeles Times* (November 21, 2019), “Consider why American kids struggle. [Math] competence depends on three types of knowledge: having memorized a small set of math facts (like the times table), knowing standard algorithms to solve standard problems (like long division), and understanding why algorithms work (knowing why the standard method of solving long division problems yields the correct answer)... students have adequate knowledge to do the first two, but not the third. They can do

math..., but they often don't understand what they are doing." This is because they lack conceptual understanding of these basic operations, and this absence of understanding matters more as they begin Algebra which causes math anxiety and a dislike for math. The pedagogy and the learning environment in the 2020 Winter Math Academy will be an eyeopener that will energize and inspire the participants. They will not just watch and wonder but will experience the magic and logic of the math they are learning!

The 2020 Winter Math Academy will meet from January 6-10, from 9:30 a.m. to 12:00 p.m. at Hobby Lobby, located at 2801 McHenry Ave., in Modesto, CA.

For additional information, contact us at drsundarmathcenter@gmail.com or visit us at SundarSTEAMAcademy.com.

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