

Strategies for Success in Mathematics

"The opportunity begins when the struggle begins."

Learning mathematics is a struggle at some level for all of us. Rather than seeing this struggle as something to avoid, we can see it as one of the most valuable things offered to our students. Mathematics offers them an opportunity to learn how to work through the struggle and how to bring to it what they have. Regardless of their perceived aptitudes in mathematics, they can learn that they have within themselves what they need to meet this challenge.

Struggling in mathematics is not the enemy, any more than sweating is the enemy in basketball. It is a part of the process and a clear sign of being in the game. Math asks our students to think in ways they are not used to thinking. They will be asked to look at the obvious in ways they are not accustomed to, and then we'll ask them to explore the not-so-obvious in similar ways. A rigor of thinking, clarity of expression, and honest pursuit is demanded.

Children learn many things in school, encompassing not just *what* they have learned, but *how* they've learned. Maneuvering through struggles in school, young people learn how to meet challenges for which there is no map and no shortcut. Life will present them with struggles, whether we wish this to be so or not. How they approach the struggles of mathematics will affect how they approach the struggles in life.

TIPS for PARENTS:

1. Ask for your student's notebook. It is easy to determine, without any math knowledge, if the organization and attempting/correcting assignments are there.
2. If your student is experiencing difficulty, guide him/her to the online resources posted on Blackboard.
3. Know that the struggle is okay, and that it takes time to learn concepts. Resist the common temptation to explain the struggle as genetic.
4. Value math homework. Encourage students to do more than just "get it done." Ask to see your student's finished homework. If he/she finishes an assignment, there are always practice problems or corrections to be done.
5. Expand the focus beyond the grade.
6. If your student has experienced difficulty before with "I thought I understood it," pick out random problems from their HW for him/her to do and check the answers.
7. Ask your student to teach you something learned that day or to explain a problem that has been corrected. Such an experience can reinforce important math concepts.
8. Contact your student's teacher about concerns. Working together, we can help every student be successful.

TIPS for STUDENTS:

1. **BE ORGANIZED AND PREPARED:** Have pencil, paper, calculator, and notebook every day.
2. **BE FOCUSED IN CLASS:** Sit up, take notes, turn your phone to off, listen carefully, respond to verbal questions, and pay attention. You may have the correct answer to the problem the teacher is discussing, but he/she will probably say something that will benefit you when working on other problems. Participation helps your attention and focus and helps to assure your understanding.
3. **USE CLASS TIME WISELY:** Begin class with homework, notebook and utensils ready. The best resources are in your classroom so take advantage of classmates, time, teacher, and answers within the class period. Remain on task and focused.
4. **USE SMART LUNCH WISELY:** SMART lunch is offered twice a week for math class. This should be focused time to get questions answered or work on practice problems.
5. **LEARN YOUR NOTES:** It is not enough to copy your notes and keep them. Actually, if you never read them, it was a waste. Use them to complete assignments, review concepts, and memorize any information needed in a timely manner.
6. **USE YOUR NOTEBOOK AS A LEARNING TOOL:** Your notebook and online resources have many excellent examples and numerous answers that can guide your learning. Use them in a manner that you have been instructed and they will lead to success.
7. **ATTEMPT ALL PROBLEMS:** It is much easier to fix a problem that is incomplete than to figure out where to start from nothing.
8. **CHECK AND CORRECT ALL PROBLEMS IN COLOR:** It is a waste of time to do problems without checking and correcting them, for they tell you nothing except you "tried." It is best to be honest about checking problems because the acknowledgement of errors and finding those errors is what leads to doing them correctly in the future and therefore, to success in math. "Careless errors" are not fatal. The cure is to check and correct homework honestly. This step also takes care of the "I thought I understood it." If you honestly do homework problems correctly, you KNOW you understand it.
9. **SEEK HELP IN A TIMELY MANNER:** I encourage every student to have a phone number, email, or other way to get in touch with at least two students in the class who can provide assistance. Seek additional help from teachers and/or peer tutors. When seeking help, it is important to understand that if you haven't done all of the steps 1-8 above, the help may not overcome your problems.
10. **REMEMBER THE GOAL IS TO BE SUCCESSFUL IN MATHEMATICS!** A positive attitude that displays what you have achieved and what you need help with is productive.

Excerpts from an article by Suzanne Sutton in "Bulletin" - a periodical for the National Association of Secondary School Principals