LEARNING MATH:

Why Kids Get Frustrated and What Parents Can Do

BY MAUREEN STEARNS

When it comes to learning math, some students do fine. Others seem to hit all the snags and pitfalls while trying to learn.

Why is learning math frustrating for so many? Even those who are considered bright and hardworking have difficulty. Elementary and high schools and most college degrees require math. College classes get bottlenecked with students who are taking the same math class for the second or third time.

While teaching math, I have hypothesized why this occurs, and it doesn't have anything to do with intelligence.

When learning math, a student must focus his or her full attention on the instruction. If a student daydreams for a just few minutes, the whole week's key points can be lost. Not so with other subjects like reading and writing. A student can get away with occasional daydreaming in those subjects and still grasp the main point. In math, having an absent mind for just a few minutes can produce poor results on tests. Making a dumb mistake on a test in reading does not produce an F like it does in math.

Learning Math Is a Sequential Process. Learners need to be firm with all the steps that lead up to the final answer and they need adequate time to process and practice just-taught information before a new concept is

---

Maureen Stearns, an author, parent, and educator, has been teaching struggling learners for more than 20 years. She holds both Exceptional Student Education and Community Psychology degrees. She recently wrote Multiply and Divide with Sticks and Steps®: Teach This Easy Method in Just 5 Minutes, *to help students conquer this stumbling block. To learn more, visit www.sticksandsteps.com.*

introduced. For some, information in math books needs to be broken down into sub-steps not found in the textbooks—information that needs to be fine-tuned by the instructor. Unfortunately, there isn't enough time to teach at every student's skill level or to break down math information for those who need it most.

A typical class of math students rarely starts on an even academic playing field. Because of the abstract nature of math, some students require multisensory techniques and extra drill and practice to catch on. There simply is not enough time to do this in most classes and if parents are unavailable or don't understand math themselves, students suffer. It is hard for teachers to meet the needs of all math students, even with earnest efforts and best intentions. Because of this, many math students never realize their full potential.

I have found that the most glaring deficit in math understanding is a skill called "number sense," or the ability to have a feel for mathematical amounts. Students who have developed number sense do much better in math. Weak math students often produce answers that are not even close to being correct. They won't think to challenge whether their answer is logical—an indication they lack number sense.

Good News

Even though academic frustration seems rampant, math frustration can be minimized with the help of adults playing math activities at home.

Math games are fun and motivating. They develop number sense and get kids involved. There are no class grades tied to the outcome. These activities do not need to be purchased and no tricky math understanding is needed for the adult. Any type of math game holds value—and don't let the word "game" make you think that a math game is not academically worthy.

Increasing a students' number sense and math confidence will not solve all the challenges felt by math strugglers. But developing number sense outside of school will certainly help. Teachers can help young students with math by sharing the ideas on page 40 with parents.

Students will be able to transfer learned information to the classroom and better know when their answer seems logical or have enough mathematical sense and confidence to keep working. ▶

Ideas to Share With Parents

1. Grab a handful of anything—marbles, paper clips, pennies—anything that can produce "a bunch of." Have the child guess and write down an estimate, then count to confirm. Hands-on counting is a wonderful activity for students who need tactile validation.
2. Find another handful of anything, estimate the amount, and then grab another handful of the same thing. Do the different handfuls hold the same amount?
3. How many cereal Os does the child eat each morning?
4. What is the value of a handful of pennies, nickels, dimes, or mixed coins?
5. Fill three different-sized cups with the same item. Estimate and write down how many Items are in one of them, count, then estimate how many are in the others.
6. Look quickly in a drawer, close the drawer, and then estimate how many items are in it.
7. Estimate amounts in a see-through container. Write the guess on paper, count items to confirm.
8. Estimate the weight of a backpack.
9. How much time would it take to reach a certain destination?
10. Place three pennies on the counter. How many more are needed to make 10 pennies? Repeat using different amounts that will equal 10. Put 12 pennies on a counter. How much more will make 50 pennies?
11. How long would it take to earn $1,000 if you earned $5 a day walking the dog?
12. How long would it take to spend a million dollars, spending a specific amount each day?
13. How many inches would a 100-foot building measure?
14. Estimate weights of objects, then step on a scale. Fill a bag with items, then estimate the weight.
15. Arrange objects heaviest to lightest.
16. For older students, determine how many miles they can travel by car for 6 or 8 hours by traveling 55, then 65 miles per hour.
17. Discuss the child's strategies used for their estimating.