

“I Hate Math” – Ways to Instill a Love of Math in Kids

Source: Joy Willis

Joy and enthusiasm are absolutely essential for learning to happen. Brain studies have shown that children’s level of stress can impact their learning and memory. Math can be a stressor for many children; in fact 37% of adults surveyed in a 2005 AP-AOL study reported they “hated” math in school. More than twice as many people “hated math” more than any other subject. But math negativity can have real-world consequences. A recent survey also found that 58% of adults were unable to calculate a 10% tip for a lunch bill.

Math negativity usually starts early, when children are exposed to powerful myths about math. The biggest myth being that math skills are inherited and better in boys than girls. Many believe that if their parents did not do well in math, they won’t either. Whether math negativity comes from stereotypes, low self-expectations, developmental lag in building skills, or fear of mistakes, the consequences of math negativity can build up. The good news is that all children have the potential to achieve success in math if they believe that their perseverance can make them better, and parents can make a huge difference. Here’s how:

- **Be a stereotype buster and math supporter.** You can improve your child’s confidence in math by talking about the role that perseverance plays in mastering the subject, and choosing your words carefully. Try not to characterize math as being very easy or very hard. Empower boys and girls by avoiding even casual comments that might result in your child building incorrect expectations. Stay away from saying things like, “I’ve always been bad in math,” which children often interpret as something they inherit. You may also want to refrain from statements like, “Math is not that important in most careers” or “I don’t know why you’re having problems. I had no trouble adding fractions with different denominators.” Your child will feel as if she is letting you down if she struggles and this may lead her to hesitate to ask for help even when it is quite appropriate to do so. She could fall further behind because she lost confidence that her efforts will make any difference. Instead, focus on her potential, and show enthusiasm when she is tasked with math homework.

- **Be positive and personal.** Making positive comments about math and pointing out real-life examples of it in action can also help build your child's belief in his math abilities. The brain is most receptive to learning about a topic if there are direct links between the knowledge and something your child values. The key to building children's interest in math is to capture their imaginations.

Show your child the value of math applied to his life, especially his hobbies and interests. For example:

- Encourage him to predict how long it will be before his favorite television show starts if it is now 3:00 and the show starts at 5:30.
- When shopping, let your child be your guide in evaluating the best value for an item he wants. Ask, which is a better buy, in terms of cost and quantity of various beverages, like a six-pack of 8 oz. juice boxes or a 64 oz. jug?
- If your child wants a specific birthday gift, encourage him to compare the cost of the bicycle, toy or tech device in ads that offer different percentage discounts and different base prices.

- **Make math active.** Surprisingly, there is a project that all children can learn from. When teaching your child about simple addition or about subtracting negative numbers, sidewalk chalk can be a huge help. Draw a number line on the sidewalk or in your driveway. For younger children, demonstrate walking and counting aloud as you step forward along the line from zero to five. Have your child do the same and ask her to write the number she counts on the line. Once those are in place, she can do an even or odd number walk or jump as she counts by twos or threes. Older children can use the line walks to add numbers, such as starting on number 4 and taking 3 more steps to discover they are on number 7. As your child builds experience, encourage her to use the word "add" and progress to writing their results in number sentences. "I was on number seven, added three more and was on number ten."

- **Encourage class participation.** Participating in class helps your child build stronger and more accurate math memory. For most children, the biggest fear is making a mistake in front of classmates. You can help reduce mistake fear and increase your child's participation by "playing" with math at home and on the go. Once you promote every day math where errors are part of the process, you'll find many opportunities to engage and motivate your child's comfort with participation and, even, mistakes. For example, encouraging your child to estimate can help her build comfort with mistakes. "More than-less than" is an activity that builds number sense and a positive attitude about the value of estimating. Select

two boxes or cans of food that weigh 8 ounces and 16 ounces. Have your child hold each as you tell her their weights. Then give her other items with the weight covered by tape or a post-it. Have her compare the feel of the new item to the feel of the 8- and 16-ounce samples. She can then estimate if the new item's weight is closer to 8 or 16 ounces. As she becomes more successful, she may want to predict a more specific weight. Encourage her to tell you why she thinks the new can weighs 10 ounces and she might say, "It is a little heavier than the 8-ounce can or it is much lighter than the 16-ounce can, but not as light as the 8-ounce can." She will be building number sense by experiencing the relationships between numbers and real measurements and developing concepts of "more than" and "less than".

- **Teach stress busters.** If children worry about making mistakes in class or on tests, taking a few deep breaths, or thinking about a favorite memory can lower stress. Remind your child of strategies she has used previously with good outcomes, such as writing down important formulas or hard to remember computations, reviewing homework errors, or using an online math game that reviews the specific skill that needs boosting. Motivating memories can switch math negativity to the positive zone, especially when your child is frustrated or experiences a setback. Ask questions or prompt her memories of challenges she has achieved, "Remember when you kept trying even though you felt like giving up when you were learning to ride a bike?" or "Do you remember when playing a song with two chords on your guitar was difficult? Now you have mastered more than twenty!" When children make the connections from other challenges to math challenges, they understand that mistakes are a natural part of new skill development in math just as they were in mastering a new video game or athletic skill.

With your help in building positive emotional connections with math, children will go from captives of math negativity to captains of their math minds. Like the toy robots that transform into space ships and tanks, their math knowledge becomes an increasingly powerful and valued tool ready to take on new challenges.