



ALABAMA MATH PARTICIPANT'S ENGAGEMENT GUIDE

Creating a Positive Mindset Around
Math: A Family Engagement Session

Creating a Positive Mindset in Mathematics

Do . . .	
✓	Show a “can-do” attitude.
✓	Embrace mistakes.
✓	Focus on problem solving and not answer getting.
✓	Believe in your child.

Don't . . .	
✗	Use negative vocabulary.
✗	Expect right answers on the first try.
✗	Focus on speed when solving problems.
✗	Say this is “easy” or they should already “get it.”

Instead of . . .	
I’m just not a math person.	→
You should be getting this.	→
Math is just too hard.	→

Say . . .	
Math isn't my favorite, but I'm up for a challenge.	→
Let's take a break, and we can try again later with some different strategies.	→
We can figure it out together; you can do it!	→

Frequently Asked Questions About Mathematics

When will they ever need all these ways to solve math problems?

Learning different ways to solve problems helps children understand the why behind the math they are doing. This is much better than just memorizing one way, not understanding it, and then not remembering it. Children also learn about different ways to solve problems because they support their grade-level work and harder math in years to come. Most of the things they are learning are the ones they will use in their daily lives outside of school.

Why is this math so different from what I learned?

Math teaching of the past has not served most children well. Many people do not feel good about math or have math stress. While this “old” math worked for some children who could remember steps, it did not help them to actually “do the math,” which involves reasoning and problem-solving. Many children are good at following steps, but they still do not like math because it does not make sense to them. It is a different world, and math should change with the changing times as well.

Why are basic facts and the procedures we learned not taught any longer?

Both basic facts and procedures continue to play an important role in math. Though important, these are not the only important ideas taught. The approach to these has also changed. The automaticity of basic facts is developed through teaching that focuses on different ways to solve math problems. Simply put, memorization is not the key to math understanding and learning.

Why does not speed matter anymore?

Too much attention has been given to speed in math classes. It has been seen as a sign of being good at math or knowing how to do math well. This simply is not true. Doing math quickly does not mean that it is done well, and as students work on harder content and problems, math cannot be done quickly. Just like in our everyday lives, the things we do are not measured by how fast it is done, but by how well it is done. Speed should not be a way of testing a student’s math understanding.

Math is right or wrong. Why doesn’t the right answer count?

The right answer does matter! It is just that when learning how to do math, accuracy is not the only thing that matters. Children need to learn different ways for being accurate as numbers and contexts change. They also need to learn when a certain strategy is more efficient than another for the numbers and operations within the problem.

Why do students solve problems in so many ways?

Students strengthen their problem-solving skills when they look at different ways to solve the same problem. Students show their understanding when they can choose a way to solve a problem and then tell why it is the best option. Drawing or modeling may help a student solidify their understanding. As their understanding improves, these drawings and models will no longer be needed. Asking students to solve a problem two ways “just because,” even for homework, is never a good idea.

Where are all the practice problems?

Children need practice, and they should be provided with different ways to practice. However, practicing math now may not look like how we learned math. Just because students are not bringing home a worksheet full of math problems for homework does not mean they are not being given a chance to practice math skills.

Won't all these strategies just confuse my child?

Children need to know different ways to solve math problems. There is power in knowing different methods, which include ways to reason about numbers and are not just about memorizing steps. This may seem confusing to adults at home because they did not learn math this way. When students know and understand different ways to solve problems, they improve their problem-solving skills, and this will serve them well throughout school and life.

How will this help my child do well on the tests they have to take?

Math teaching should be based on conceptual understanding, which is the why of math. We want students to understand what they are doing and why they are doing it. Children who understand the steps they are taking are better off than those who simply memorize the steps. Memorizing steps is not effective for long-term learning.

Why does math fluency matter to my child?

Many fluency strategies are used by adults in their everyday lives (think about math with sales, tips, and taxes). A big difference is that many adults had never taught them in school. Individuals who know different ways to solve problems have advantages in math class over those that only know one way. Limited or no access to mathematical fluency creates long-term problems for children, both today and in the future.

*Figuring Out Fluency,
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