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Discovery

7 ways to help your kids with math homework

During Teacher Appreciation Week, learn how educators approach math



Parents with "math anxiety" can adopt tactics teachers use to become better math coaches at home.

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If you've ever had to help your child with math homework, you really appreciate their teachers, who do it every day. "Math anxiety" isn't something only kids experience.

Maybe you haven't seen an algebra formula in years, and weren't that comfortable with them when you were a student. Maybe you're a skilled mathematician, but don't know how to explain what you're doing to a child. Whatever the case, math homework can leave parents feeling every bit as frustrated as their children. Homework doesn't have to lead to unpleasantness, though.

What I've learned through my own experience -- as a teacher, a researcher, from helping my own children, and now watching my daughter work as an elementary school mathematics teacher -- is that communication is (excuse the pun) the common denominator when it comes

to making math homework a positive experience.

The National Science Foundation (NSF), where I work, is dedicated to research. We support scientists across the country who study learning and education systems. But we're also teachers at heart. On lunch breaks in the past, a group of us gathered to help our NSF peers with their own questions about how to help their kids learn math.

Here are a few tips from what we've learned:

1. Try as hard as you can to understand what your child is saying. When your child is working out a math problem, ask her to think out loud, to say what she's doing and why. In some cases, your child might be able to answer her own questions. Don't just come in with an explanation of how things should be done.

2. We've learned a lot about teaching. NSF-supported researchers and other scientists are producing findings that change the way we understand learning and how we teach. Math instruction today might look very different from when you were in school. Keep an open mind. If you're dismissive of something, there's a chance your child will be, too.

3. Assume there is some logical thinking your child is employing. Even if he's producing incorrect answers, your child is employing some kind of thought process, and understanding it is the key to providing help. Let's say your child is adding $\frac{1}{3}$ and $\frac{1}{4}$ and getting $\frac{2}{7}$. If his explanation is that he was adding the numerators and denominators, you've just learned that he might not fully understand what a fraction is. And that gives you a starting point for helping.

4. Homework is about more than producing the correct answers. It's about learning processes and skills. Even if you can come up with the right answer to a problem with which your child is struggling, there's a lot you still need to explain -- namely, how you arrived at that point.

5. Become a teacher's ally. Talk to your child's teachers. Find out how they are teaching certain ideas and concepts. At times, parents unhappy about their children's struggles to learn can approach teachers from a place of frustration. View your child's teachers as your partners and collaborators.

6. Find additional help. Worried you won't be able to understand the math your child is trying to learn? Take a careful look at her textbook or online learning materials. See if the publisher provides any resources. Look for other publicly available teaching aids, especially those that have had NSF support. Do you have friends or coworkers with children? Start a lunch group to talk through your homework challenges.

7. Remember, every child is different and learns differently. Just because your oldest child learned his multiplication facts one way doesn't mean his younger sister will do the same. Which brings us back to the first tip: Listen to each child and do your best to understand.

-- Joan Ferrini-Mundy, NSF



Joan Ferrini-Mundy

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