Frequently Asked Math Questions from K-5 Families

1. Why is this math so different from what I learned?

   The world continues to change and the subject of math is keeping up! We have many technologies that can do the types of computing and procedural tasks that were the focus of math curriculum in the past. Students still learn and practice basic facts and the U.S. standard algorithms we were taught, but they may not be taught in the same grades that you remember learning them. Today, citizens need more data analysis, problem solving and number sense skills than ever. Your child's math instruction may look different because it adds more collaboration with classmates. It puts more emphasis on making sense of and explaining math, rather than the mimic and memorize approach that was popular many years ago in some schools. This prepares students for how they will need to use math in their lives now and in the future. Successful adults must flexibly apply math skills in a wide array of career settings and in daily life tasks. Building a strong foundation of problem solving skills and basic mathematical concepts along with the ability to calculate and estimate remain at the core of the math instruction your children experience.

2. Doesn't learning all of these strategies confuse children?

   It goes back to the difference in how students experience all these strategies. Students learn to name and formalize strategies as they make sense of math concepts and number relationships. Because adults already have understandings and strategies that they use, any new ones may seem overwhelming, less efficient or even confusing. With the help of teachers and classmates, students build math ideas and strategies over time. Then they progress to deciding which strategies are best for the situation they need to use them in. Instead of confusion, this results in flexible thinking and builds a toolbox of strategies to get any task done.

3. It seems like doing math quickly and getting the right answer don't matter anymore. Am I missing something?

   It is absolutely important to get correct answers. Students are taught strategies that develop organization, precision and accuracy. Sometimes in real life and in school, math tasks require more than one correct answer or a task requires the more complex skills of evaluation, analysis, synthesis, and supporting a claim with evidence. When thinking mathematically, emphasizing speed can interfere with the development of thinking skills and experiencing the joy of figuring out something for yourself. Students can show what they know on assessments by using any strategy that makes sense to them and gets them to a right answer. Math is a rich subject and we aim to support all students to mathematize at the pace that works for them. Developing confidence and competence is an antidote to math anxiety!

4. How do I know if my child is doing well in math?

   Here are some signs of a successful math student:

   - Able to make sense of math presented with numbers & equations, words and/or represented visually
   - Able to check for reasonableness of answers, including eliminating distractors on a test
   - Able to efficiently and accurately compute mentally and on paper, which includes choosing the best strategies for the situation
   - Able to reason and solve problems based on understanding instead of "tricks"
   - Able to answer end of unit test questions with explanations and models that show deeper understanding than just memorized vocabulary and rules

Adapted from Figuring out Fluency in Mathematics (Bay-Williams & SanGiovanni)

FLUENCY HOMEWORK QUESTIONS FOR PARENTS

SUPPORTING YOUR CHILD'S MATH LEARNING WITH THEIR MATH HOMEWORK

To understand what they are doing (and see what your child understands), choose a problem:

- Tell me everything you know about this problem.
- What does this problem mean?
- When might this math be useful?

To focus on your child's thinking:

- How did you decide to use that strategy?
- Are there other options for solving that problem?

To build your child's confidence in their work:

- How did you decide which strategy to use for this problem?
- How do you know your answer makes sense?
- Convince me that your answer is correct.

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