

A Parent's Guide Helping Your Child with Today's Math

This guide was developed to provide parents with information they can use to help their children with today's mathematics.

Math looks different these days.

When you visit your child's math class, it may look different from what you remember. For example, 2 apples + 2 apples still equals 4 apples, and learning your multiplication tables is still important. But, now you are likely to see your child solving real problems. Second graders might:

- Figure out how many apples they need for a classroom party.
- Determine the cost to buy those apples.
- Compare how much money they need to have in the class kitty.

Fourth-graders are learning not only that $7 \times 8 = 56$, but also are deciding when they should use multiplication to solve a problem. Educators want children to understand that math is not only useful in the classroom, but in their daily lives too. We know that every child is capable of achieving in math topics such as geometry, data and statistics, and algebra – topics we've traditionally thought of as accessible only to some.

My child's teacher says that the mathematics is problem-based. What does that mean?

Teachers are now using activities that are connected to students' real lives. Like mathematicians, students are now solving problems that may take them an hour or, perhaps, several hours to solve. There may be many ways to solve the problem. Children think about mathematics in different ways depending on their prior experiences at home and school. Teachers want your children to understand how important math is and how it helps them solve everyday problems. By allowing students to think flexibly about numbers, teachers encourage them to "own" the mathematics forever, instead of "borrowing" until class is over. Parents can help by showing their children when they use math. That may be as simple as:

- Helping your child estimate in the grocery store;
- Deciding together how many plants can fit into a garden and drawing a scale plan of your garden; or
- Discussing how the interest works on the mortgage.

My child talks about working in pairs and groups. Is this helpful?

Research shows that students' working together helps with understanding. It allows more time for all young

people to talk about what they know and don't know. During group problem-solving, teachers are actively listening to the students' reasoning which, in turn, helps them better understand the students' thinking. There is still time in the classroom for students to work independently, and teachers know how important that is. Business and industry leaders say that the three "R's" are still important, but that new employees also need good communication skills and the ability to work in a team.

How do I help my child when the homework is so different from what I did in school?

Homework may look different from when you were in school and the amount of it may be different also. Practice is still important and students continue to do that. Students will still be expected to memorize basic facts, and you'll still see homework that asks you to help them do that. But, we know from research that students need activities and tasks that allow for a deeper understanding of the math. These tasks may take longer to solve and so fewer problems are assigned. But these problems will help students understand how integral math is in their lives and will continue to be in the workplace.

I see fewer graded papers coming home than I remember bringing home to my parents. How is my child evaluated?

Teachers still use traditional paper and pencil tests to help them assess your child's progress. They also use district and statewide test results to help them make decisions about instruction and assessment. However, teachers are also using tried and true methods of "kid-watching." Watching and listening to students while they work in pairs, groups or alone provides teachers with valuable information about your child's progress. Students are asked to tell their teachers what they know in many ways. They may be asked to keep a math journal and write about the math they are learning. For example, after learning a new skill your child may be asked to write and describe how they would teach what they learned to a younger child. Teachers want to use as many ways as possible to help them decide what students know and understand.

Math is everywhere!

Look for it with your kids.

Football – Is it possible for a team to score 22 points?

How many ways can they do it? Is there an impossible score?

Driving to School – What does “miles per hour” mean? How does it help us know how long it will take us to get to school? What else may influence how long it takes us to get somewhere in the car?

Consumers – Is it more cost effective to lease or buy a car? How much paint do I need to buy to paint the front hall? Can you guess the amount needed or do you need measurements to figure out how much paint to buy?

What resources are available to help me support my child's interest in math?

National Education Association – www.nea.org

The National Council of Teachers of Mathematics – www.nctm.org

A Maths Dictionary for Kids – <http://mathsdictionaryforkids.com>

The Math Forum-Ask Dr. Math – <http://mathforum.org/dr.math>

Cyberchase – <http://pbskids.org/cyberchase/parentsteachers/index.html>

PBS Parents-Early Math – www.pbs.org/parents/earlymath/about.html

Education World – www.educationworld.com/a_admin/admin/admin339.shtml

Figure This! Math Challenges for Families – www.figurethis.org

Math Power: How to Help Your Child Love Math, Even if You Don't – Patricia Clark Kenschaft

50 Simple Things You Can Do to Raise a Child Who Loves Math – Kathy A. Zahler

Educating Our Children,
Engaging Our Parents, Empowering Our Schools

