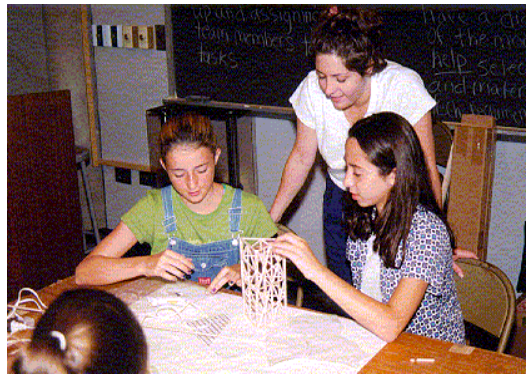


When you were in school, you probably learned mathematics skills by watching the teacher and then practicing the skill many times. While mathematical skills are still very important, today's school mathematics programs also include attention to learning how to reason and apply understanding and skills to solve a range of real problems.

When you visit today's classroom, you might notice students...

- ◇ Interacting with each other, as well as working independently, just as adults do.
- ◇ Using textbooks as only one of many resources. Manipulatives, technology, graphical displays, and measuring devices are useful tools, and students should be learning *how* and *when* to use them.
- ◇ Becoming aware of how math is applied to real life problems, not just learning a series of isolated skills. As in real life, students will take time to solve multi-step problems.
- ◇ Realizing that many problems have more than one "right" answer. Students will explain the different ways they reach a variety of solutions and why they make one choice over another.
- ◇ Working in groups to discover patterns, representations, and solutions. They will be more than "listeners;" they are highly engaged.
- ◇ Reviewing peer feedback and/or teacher commentary to revise their work.

- ◇ Learning to communicate mathematical ideas with one another using appropriate terminology and notation. Student will use accountable talk as a regular part of all lessons.
- ◇ Working in a physical setting that promotes teamwork, identifies multiple approaches and insights, and helps students challenge and defend possible solutions. Even while using computers, students will not always work alone, but with other students, helping each other.
- ◇ Assessing their own work products by comparing them with the expectations described in the Georgia Performance Standards.



During your visit, the teacher may be...

- ◇ Posing problems that engage students in mathematical thinking and stimulate their interest in learning.
- ◇ Moving around the room to observe students as they explore mathematical ideas.
- ◇ Raising questions that encourage students to consider alternative solutions and that challenge deeper thinking about real problems.

- ◇ Guiding and supporting students with leading questions.
- ◇ Providing multiple pathways to learning.
- ◇ Allowing students to raise original questions about math for which there is no "answer in the book" and helping students gain mathematical competence and confidence by finding their own methods and solutions.
- ◇ Promoting student use of inquiry and creativity. Both teacher and students may pose new problems that are variations or extensions of a given problem.
- ◇ Using manipulatives and technology as appropriate.
- ◇ Demonstrating techniques or giving mini-lectures to address misconceptions.
- ◇ Explaining expectations or assessing performances by referring to the Standards posted in the room.
- ◇ Assisting students as they summarize their learning for the day.
- ◇ Collecting evidence of student learning and achievement.
- ◇ Providing feedback or commentary on student work—orally or in writing.
- ◇ Posting quality student work and indicating how it meets/exceeds Standards.
- ◇ Encouraging students to be responsible for their learning and their behavior.
- ◇ Assessing student understanding with rubrics, games, quizzes, or other forms of assessment.

Ways You Can Help

Your support makes a big difference in your student's success in math. Please consider these:

At Home

1. Communicate a positive attitude toward mathematics. Your attitude about learning and using math will be the most important contribution you make toward your student's success in mathematics.
2. Talk with your student about what is happening in mathematics class.
3. Look for ways to connect math lessons with daily activities. Encourage your elementary student to name shapes, to count and sort items, to compare sizes and positions (inside-outside, above-below, in front-behind, right-left), to compute with money, and to tell time. Encourage your middle grader to halve recipes, estimate gas mileage, and figure restaurant tips. Ask your students how they think about these tasks and share your strategies with them.
4. Schedule a regular time for homework and provide a comfortable place for studying that is free from distractions.
5. Monitor your student's homework regularly by reviewing 2-3 problems or asking your student to briefly describe the focus of the assignment. When your student asks for help, work with him/her, but do not do the work for him/her.

At School

1. Attend Open House, Back-to-School Night, and other school functions.
2. Consider scheduling a conference with the mathematics teacher. Ask about the goals of the class, what kinds of assessments are used, and what you can do to help.
3. Be a volunteer in your student's school.
4. Join the local parent-teacher organization and be active in its endeavors.

GPS for Mathematics Implementation Schedule

The Georgia Performance Standards for Mathematics are scheduled for implementation over several years. The schedule below shows the school year during which the Standards will first be taught and tested.

Grade 62005-2006
Grades K-2, 72006-2007
Grades 3-5, 82007-2008

For grade specific information, please refer to <http://www.georgiastandards.org/> and scroll to GPS for Parents.



For more information about mathematics instruction and assessment at your student's school, please contact the school's principal and/or _____, Mathematics Specialist, _____ (www.k12.ga.us).

Implementing Standards in the Mathematics Class- room

What Parents/Guardians Should Know

School System logo

Standards are a set of expectations describing what students should know and be able to do. Standards guide the instruction and the assessment in the math classroom.

Students should experience mathematics as interesting, relevant, and important as a course of study and as a bridge to the real world of jobs and adult responsibilities. This means going beyond memorization into a world of inquiry, reasoning, and problem solving.