



New Mathematics Curriculum – K-2nd, 7th grade New Science Curriculum – 3rd-5th grade

Implementation of the new Georgia Performance Standards' mathematics and science curriculums began during the 2005-06 school year, with the new mathematics standards introduced in sixth grade and new science standards in sixth, seventh, and 9-12th grades.

Phase-in continues in 2006-07 with new mathematics standards introduced to kindergarten through second grades, as well as seventh grade, and new science standards introduced in third through fifth grades.

Is Fulton required to adopt the Georgia Performance Standards?

Yes. The Georgia Performance Standards, or GPS, is replacing the previous state curriculum called the Georgia Quality Core Curriculum (QCC). The Georgia Department of Education (DOE) requires that all public schools adopt the new curriculum. Fulton County will supplement and enrich both the mathematics and science curriculums with additional concepts that go above and beyond the DOE's requirements.

Which students are affected by the curriculum changes?

All students will be affected as the new curriculum is phased in. Last school year, the new mathematics curriculum was introduced to sixth grade and the new science standards were introduced in grades 6-7 and 9-12.

This school year, kindergarten through second grade, as well as seventh grade, will use the new mathematics curriculum. The new mathematics curriculum will be fully implemented in grades K-8 in 2007-08. Students in third through fifth grades will begin using the new science curriculum.

Implementation of the new science curriculum will be complete in Grades K-8 after it is introduced to kindergarten, first, second, and eighth grades next year. High school courses Human Anatomy & Physiology, Earth Systems, and Environmental Science are slated for implementation in 2008-09.

The phase-in schedule for mathematics after 2006-07 is:

2007-08	3 rd -5 th grade and 8 th grade. New mathematics textbooks will be introduced for grades kindergarten through eight.
2008-09	9 th grade
2009-10	10 th grade
2010-11	11 th grade
2011-12	12 th grade

What are the significant differences between the Quality Core Curriculum and the Georgia Performance Standards, particularly in the mathematics and science curriculums?

GPS sets high expectations for all students by defining the level of work that demonstrates mastery of concepts. The Quality Core Curriculum was an objective-based curriculum which was sufficient at the time it was developed. However, QCC objectives were a checklist of concepts to be covered by teachers. QCC objectives did not measure the depth of knowledge that a student attained while learning the concepts.

GPS provides the curriculum framework to guide teaching and learning. Teachers use assessments to determine what students know and the extent to which the student understands the concepts and can apply them. GPS also aligns assessment and accountability. QCC objectives were so broad that

teachers were required to prioritize the curriculum and focus their efforts on what the teacher decided were the most important topics. Teacher prioritization of topics did not always match DOE prioritization of topics. GPS focuses on what we expect students to know and be able to do and then designs the curriculum to meet that goal. The goals are very specific for each grade level.

The new mathematics standards focus on application of concepts and integration of strands (numbers and operations, geometry, data analysis and probability, algebra, measurement, and process standards). Students use the tools they develop to solve mathematical problems that occur in real-life situations.

The focus of science instruction changes from just *knowing about* science to *applying* it. Inquiry learning and the development of scientific thinking are integral to the teaching of concepts, with special attention to performance. Teachers use a variety of assessment methods to determine what students know and the extent to which the student understands the concepts and can apply them to real-world situations.

Will the new mathematics curriculum challenge my child?

Greater expectations for mathematics standards is defined by the development of “deeper mathematical knowledge,” not more “surface” mathematical processes. In kindergarten through second grade, the new Georgia Performance Standards increase academic rigor by emphasizing conceptual development. A deeper understanding of mathematical concepts is achieved through the use of manipulatives, discovery learning, technology integration, and mathematical discourse. Further, teachers will modify instruction and expectations to each child’s skill level so that all students are appropriately challenged in the on-grade level mathematics class.

In seventh grade, the alignment of assessment and accountability moves from algorithmic mathematical skills to application of mathematical concepts. It also allows for integration of mathematical strands (algebra, geometry, data analysis, numbers and operations, and process standards) into performance tasks that allow students to solve real-world problems. This alignment helps teachers to focus on what students are expected to know and be able to do at each grade level.

The new curriculum allows middle school students to complete the equivalent of the course content in an Algebra I course by the end of eighth grade. Middle school students will participate in activities that are considered to be on-level or advanced level while meeting grade-level standards. Teachers will modify the level of instruction to each child’s skill level. Specific details on the concepts taught at each grade level are online at www.fultonschools.org/dept/curriculum/math/gps.pdf.

What about the new science curriculum? Will my child be challenged?

The science GPS is aligned to the National Research Council’s “National Science Education Standards.” The “Benchmarks for Science Literacy” are used to determine both the content and the process skills required for students to be rigorously challenged by the new curriculum. The new Georgia Performance Standards increase academic rigor by emphasizing conceptual development and a deeper understanding of science concepts through extensive use of scientific tools, discovery learning, technology integration, and scientific discourse.

The alignment of assessment and accountability moves from theoretical recitation and regurgitation of scientific concepts to application of scientific concepts and the development of scientific thinking. This integration helps teachers focus not only on what students should know but also on what they should be able to do at each grade level.

August 2006

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