

Georgia Department of Education Support for Struggling Learners in Mathematics

Every effort should be made to assist struggling students before they fail a course. Support should include opportunities such as: classroom interventions, a second mathematics class, tutoring, and before/after-school programs. Student progress should be monitored continually, using formative assessments that show mastery/non-mastery of specific grade-level content standards. Re-teaching should focus on the skills and knowledge that have not yet been mastered, using research-based instructional strategies. Previewing content about to be taught in the regular classroom, for example, has been proven to be beneficial in raising student achievement.

In addition to classroom interventions that follow the Tier 1 Pyramid of Interventions/Response to Interventions guidelines, many Georgia middle and high schools offer a Mathematics Support class for students who struggle in mathematics. This elective class is a course option on the List of State-Funded K-8 Subjects and 9-12 Courses, found on the GaDOE web site. Rather than waiting for students to fail, schools use the Mathematics Support course as an early intervention for student success.

Mathematics Support Class Guidance

Purpose: The purpose of the Mathematics Support class is to address the needs of students who have traditionally struggled in mathematics by providing the additional time and attention they need in order to successfully complete their regular grade-level mathematics course without failing. Mathematics Support is an elective class that should be taught concurrently with a student's regular mathematics class.

Who should teach this course? The course should be taught by a certified mathematics teacher, preferably one with experience in differentiating instruction to meet the needs of struggling students. The Mathematics Support teacher should work closely with the teacher(s) in the regular academic mathematics class to align content, instruction, and assessments.

What credit is earned for the Mathematics Support class? One unit of elective credit is earned for this course.

What components should be a part of the Mathematics Support Class?

- All students in a particular Mathematics Support class should be enrolled in the same regular mathematics course.
- The Mathematics Support class should focus on mastery of the standards being taught in the regular grade-level mathematics class, not the content from elementary or middle school.
- Grading practices should emphasize mastery of standards through the frequent use of aligned quizzes and tests.
- Continual progress monitoring should be used to assess and diagnose each student's strengths and weaknesses, based on grade-level mathematics standards, and to provide appropriate interventions.

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- Opportunities should be provided for students to review content with a focus on standards not previously mastered.
- Opportunities should be provided for students to preview mathematics concepts to be addressed in the regular mathematics class, including prerequisite skills necessary for those concepts, vocabulary, and definitions.
- Proven strategies for success in mathematics should be utilized on a daily basis. Students should be engaged in *doing* mathematics, explaining their thinking, and justifying their work. Multiple representations of concepts (tables, charts, graphs, verbal descriptions) should be used as often as possible.
- There should be strong emphasis on building a positive disposition toward learning mathematics.
- Although there is no class size requirement for the Mathematics Support course, a reduced class size is recommended.

How important is collaboration among teachers to the success of students in the Mathematics Support Class? Teachers of the Mathematics Support courses, the regular mathematics courses and, for students with disabilities, special education teachers share responsibility for students' mathematical achievement. All teachers who instruct Mathematics Support students should communicate in an ongoing manner about the following:

- individual student progress, including grades, strengths and weaknesses based on standards, mathematical disposition, and work habits;
- curriculum expectations, including specific standards to be addressed based on a timeline, prerequisite skills, vocabulary, and potential misconceptions;
- instructional strategies, including specific strategies for teaching mathematics concepts that are being used in both classrooms to provide consistency and understanding for teachers and students; and
- assessments, including content and formats that are being used to evaluate students for specific standards.

How will students be evaluated in the Mathematics Support class? The goal of Mathematics Support is to help students successfully complete their regular grade-level mathematics course without failing. Assignments, quizzes and tests should be aligned to the standards being taught. Individuals should be given multiple opportunities to show mastery of the content, including opportunities to re-test on the material covered in the regular mathematics class. Mathematics Support provides the time some students need for additional practice or re-testing. The value of formative assessment and feedback cannot be overstated. Continuous progress monitoring with both feedback and commentary is essential in this course. Students should not feel pressure to “make grades” in this class as much as they should be motivated and encouraged to master standards. Documented continuous communication with students on an individual basis is the most appropriate way to maintain records of progress. REP assessment processes may be appropriate models.

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How is this course different from REP? The focus of the Mathematics Support course is to support students specifically in the high school mathematics course in which they are currently enrolled. The focus of REP is to increase student success in passing the Georgia High School Graduation Test.

If our school is on a block schedule, does this mean that students may have mathematics for two blocks during the school day? It is important that this course be taught concurrently with the regular mathematics course. Scheduling options that keep struggling students engaged in mathematics throughout the school year are preferable.

How should students be selected to be in a Mathematics Support class? Students should be placed in a Mathematics Support class based on local system criteria for identifying students who are at risk for failing mathematics. Students who are *placed* in high school and have not passed the 8th grade mathematics CRCT should certainly be in the support class. Other criteria might include teacher recommendation based on student performance in the previous or current mathematics class, prior retention, failure of a mathematics course, and/or low scores on the mathematics portion of the CRCT, mathematics EOCT, or other instruments used by the system to predict success.