





FASTT Math Next Generation

Aligns to Title I, Section 1003(g)
SCHOOL IMPROVEMENT GRANTS

School Improvement Grants (SIG) are intended to help Title I schools, identified for improvement, corrective action, or restructure, implement reform strategies, specifically the four intervention models—Turnaround, Restart, School Closure, or Transformation Model. Within the Turnaround and Transformation Models, districts and schools are required to implement a series of required activities, as well as other optional elements. The chart below shows how **FAST Math Next Generation** can support School Improvement, specifically for Turnaround and Transformation Models. The criteria are drawn from the Federal Title I, Section 1003(g) Guidance posted at: <http://www2.ed.gov/programs/sif/legislation.html>.

SIG Requirements	<i>FAST Math Next Generation</i>
Implement an instructional program that is research-based	<p><i>FASTT Math Next Generation</i> is an efficient, personalized technology program, in English and Spanish, to help students in grades 2-9+ achieve math fact fluency in just 10 minutes a day. Through the identification and remediation process provided by <i>FASTT Math Next Generation</i>, students develop the understanding and skills necessary to automatically recall operations with whole numbers 0-12 for addition, subtraction, multiplication, and division. The program accelerates and fosters the developmental progressions leading to fluency as described by mathematics education researchers. As a result of the development of math fact fluency, students create the number foundation necessary for performing higher-order mathematics.</p> <p><i>FASTT Math Next Generation</i> uses the FASTT system—Fluency and Automaticity through Systematic Teaching with Technology—developed by Dr. Ted Hasselbring, noted researcher at Vanderbilt University. Designed to carefully manage cognitive load, the FASTT algorithm uses the expanding recall model to help students move facts from working memory to long-term memory by strategically interspersing new facts with fluent facts, controlling response time, and providing instant corrective feedback. The <i>FASTT Math Next Generation</i> instructional model is based on nearly two decades of research on the development of students’ mathematical fluency. Research shows that when used daily for 10 minutes, most math-delayed children can develop fluency with all basic facts in a single operation after approximately 100 sessions.</p> <p> For additional information on the research for <i>FASTT Math Next Generation</i> please refer to; http://teacher.scholastic.com/math-fact-fluency/fastt-math-next-generation/research</p>
Implement an instructional program that is aligned with State academic standards	<p>The Common Core State Standards require all students to be fluent with whole number operations by the end of Grade 3. <i>FASTT Math Next Generation</i> is a research-validated, adaptive software program that creates a personalized learning path to help every student in Grades 2 and up achieve fluency and flexibility with their math facts. Lessons, practice games, and assessments cover addition and subtraction facts within 24 and multiplication and division facts within 144.</p>

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<p>Implement an instructional program that is aligned with State academic standards <i>Continued</i></p>	<p><i>FASTT Math Next Generation</i> incorporates the application of the Practice Standards throughout the program. The very nature of fact fluency requires students to attend to precision; <i>FASTT Math Next Generation</i> uses adaptive lessons, corrective feedback, and engaging games to ensure students are fast and accurate with their facts. The program uses visual models and a “see it, hear it, say it, type it” routine during instruction. By providing a mental model for facts and teaching through different modalities, students learn to look for and make use of structure and patterns. Students learn to recognize multiplication as repeated addition, for example, and learn facts as commutative pairs. Finally, STRETCH-To-Go games challenge students to use their reasoning skills to apply basic facts to more rigorous concepts such as recognizing unknowns, multi-digit operations, the associative and commutative properties, inverse relationships, and multiples of 10 and 100. Utilizing gaming encourages students to persevere in a non-threatening environment and to reason abstractly and quantitatively.</p> <p> For information about how <i>FASTT Math Next Generation</i> correlates to State Standards, please see: http://teacher.scholastic.com/math-fact-fluency/fastt-math-next-generation/common-core-standards</p>
<p>Integrate technology-based supports and interventions as part of the instructional program</p>	<p><i>FASTT Math Next Generation</i> includes adaptive and motivating student software along with teacher materials and a management system for progress monitoring and differentiated instruction. The program’s implementation model allows students in Grades 2–9+ to work independently on the computer for 10 minutes a day, 3 to 5 times a week. The <i>FASTT Math Next Generation</i> adaptive technology manages the pace, level, and multimodal instruction, personalizing learning for each student. Thus, all students—including Title I, Special Education, and at-risk students, as well as students learning math facts for the first time—will build fact fluency fast.</p> <p>In addition, <i>FASTT Math Next Generation</i> leverages the power of technology to provide a gaming environment. These games allow students multiple opportunities to think strategically and gain additional practice with their learned number facts. The program software also allows for the production of reports and graphics depicting a student’s progress as a function of effort. The ability to view how one is improving by investing time and thought promotes a growth mindset. Enabling students to develop an understanding that investing effort leads to learning and “getting better at math” is clearly a primary way to improve students’ overall experiences in school mathematics. <i>FASTT Math Next Generation</i> is able to use the technological interface to give students, teachers, and leaders access to information describing this improvement.</p>
<p>Use formative, interim, and summative assessments to inform and differentiate instruction</p>	<p>Students begin all four <i>FASTT Math Next Generation</i> operations with a Placement Assessment, which consists of two parts—a Typing Assessment and a Fact Assessment. Together, these assessments create a baseline of a student’s fact fluency in each operation. The Software determines fluency by subtracting the student’s typing speed from the time it takes the student to input the answer. A fact is considered fluent if the student can provide the correct answer in 0.8 seconds or less.</p> <p>After the Placement Assessment, the program automatically determines which facts students have already mastered and places them at an entry point that builds on their previous knowledge.</p>


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<p>Use formative, interim, and summative assessments to inform and differentiate instruction</p>	<p><i>FASTT Math Next Generation</i> then provides direct instruction and individualized practice. Speed and accuracy data is reported for individual students each time they use the software. The adaptive software uses this data to customize pacing, instructional load, and content for each student.</p> <p>The Instructional Software also includes periodic assessments to continuously monitor student progress. The first part of a student’s daily lesson may be an assessment. The following two types of assessments are presented at different points determined by a student’s instructional time in the software and his or her fact states.</p> <ul style="list-style-type: none"> ▪ Mastery Assessment— To determine if the student is able to respond fluently to Focus Facts. If so, the facts become Fast Facts; if not, the facts remain Focus Facts and are presented again in the next Mastery Assessment ▪ Challenge Assessment-- To determine if the student is able to respond fluently to facts in the next level, even though these were non-fluent after the Placement Assessment. This accounts for facts the student may have learned outside the software.
<p>Promote the continuous use of data in order to meet the diverse academic needs of individual students</p>	<p>The <i>Scholastic Achievement Manager (SAM)</i> captures performance data each time students use <i>FASTT Math Next Generation</i>. SAM organizes progress and usage data in easy-to-access data-rich reports. Teachers are able to run reports to view data for individual students, groups, or an entire class. The reports enable teachers to monitor students’ progress, target instruction, and share results with administrators and families. In addition, SAM will alert teachers when it identifies a problem, like low usage or slow progress, or when there is reason to celebrate, like achievement of a new level in fact fluency.</p> <p>The Teacher Dashboard pulls key data from SAM to track student performance on the Instructional Software and STRETCH-To-Go. The Dashboard allows Teachers to access Data Snapshots that show the most crucial student data metrics for implementation and Notifications that help monitor program usage, such as average Instructional Software time. The Reports Scheduler allows Teachers to schedule reports automatically from SAM, and Daily Quick Tips enhance the daily instruction and program implementation.</p>
<p>Implement a school wide <i>Response to Intervention</i> model</p>	<p><i>FASTT Math Next Generation</i> aligns to the Response to Intervention Framework in each tier, and supports all diverse learners who require any of the multi-tiered levels of intervention. The program was purposefully designed to be used flexibly by educators within a variety of instructional models that address all three tiers of RTI.</p> <ul style="list-style-type: none"> ▪ Tier 1— <i>FASTT Math Next Generation</i> can be used to supplement classroom instruction and provide students with extra practice on any of the four basic math operations that they are learning in class. ▪ Tier 2—<i>FASTT Math Next Generation</i> can be used for student who have not mastered fluency on grade-level operations while other operations are taught in the classroom. ▪ Tier 3—The <i>FASTT Math Next Generation</i> Teacher’s Guide includes research-based lessons and targeted strategies in Quantity Concepts and The Counting System for students who experience learning challenges with math facts.

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<p>Implement effective strategies to ensure that students with disabilities and LEP students acquire language skills to master academic content</p>	<p><i>FASTT Math Next Generation</i> includes many support strategies for all types of learners. The Teacher’s Guide includes a section dedicated to Intensive Support – designed to help Teachers form an effective intervention plan for students who are experiencing learning challenges with math facts. The Intensive Support section includes a Diagnostic Assessment that evaluates students’ quantity concepts and skill in navigating the number system. Using the Diagnostic Assessment and Intensive Support lessons, Teachers are able to differentiate instruction based on students’ needs. They can use the lessons during pull-out intervention, during lunch, before school, or after-school to replace grade-level math curriculum for students who need intensively-focused foundational support. Teachers may supplement the ongoing grade-level curriculum by teaching Intensive Support lessons during independent work time or as a precursor to the <i>FASTT Math Next Generation</i> Instructional Software. Additionally, they may teach the Intensive Support lessons in a small group setting while the rest of the class works on the Instructional Software or individualized practice worksheets.</p> <p><u>Strategies for English Language Learners</u></p> <p><i>FASTT Math Next Generation</i> includes many support strategies for English-Language Learners. The 1.25-seconds monitored response time can be lengthened to allow more time to respond. The number of problems presented during instruction can be reduced for students who need more time to absorb new information. The audio function can be turned on or off. Students can listen repeatedly to any instructions they may have missed. Problems can be spoken aloud in English and Spanish.</p> <p><u>Strategies for Special Education Students</u></p> <p>The <i>FASTT Math Next Generation</i> technology is completely adaptive, keeping students of all abilities at the achievable edge of their capabilities. The <i>FASTT Math Next Generation</i> program technology includes Universal Design features that help math-delayed students develop mathematical fluency. Within the Software instructions, minimal screen text reading is required and audio instructions are provided for each student activity. The initial Typing Assessment measures a baseline of student keyboarding skills so that this measure is distinct from the measure of fact recall. Teachers can control response time limit allowed for student to demonstrate fact latency. Two color contrast settings can be set for visually challenged students.</p> <p>To support a range of learning styles, the <i>FASTT Math Next Generation</i> software presents facts in multiple formats—orally (narrated), symbolically (e.g. $3+4=7$), and graphically (using 10-frames in addition and subtraction and arrays in multiplication and division). In addition, <i>FASTT Math Next Generation</i> allows the teacher to adjust the settings of the program to accommodate other learner differences. The 1.25 second monitored response time can be lengthened for students with processing deficits. The number of problems presented during instruction can be reduced for students who need more time to absorb new information. Problems can be spoken aloud, in English or Spanish, for visually impaired students (and to build an oral memory connection with each fact). Finally, visually impaired students are supported with two high color contrast settings for the screen display.</p>

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<p>Establishing schedules and strategies that provide increased learning time</p>	<p><i>FASTT Math Next Generation</i> includes adaptive and motivating student software along with teacher materials and a management system for progress monitoring and differentiated instruction. The program’s implementation model allows students in Grades 2–9+ to work independently on the computer for 10 minutes a day, 3 to 5 times a week. The <i>FASTT Math Next Generation</i> adaptive technology manages the pace, level, and multimodal instruction, personalizing learning for each student. Thus, all students—including Title I, Special Education, and at-risk students, as well as students learning math facts for the first time—will build fact fluency fast. <i>FASTT Math Next Generation</i> complements a core math program, and can be implemented before- or after school, during homeroom, during the instructional math block, in a computer lab, as a pull-out intervention, or in summer school.</p>
<p>Providing ongoing mechanisms for family and community engagement</p>	<p>A Parent Letter, available in English and Spanish, explains the goal of the <i>FASTT Math Next Generation</i> program, steps children will be completing as they learn, and ways to reinforce their learning at home. STRETCH-To-Go games can be accessed at home or anywhere with Internet access. Teachers can share with parents the Student Fact Grid report, which displays the student’s fluency status with all facts in the operation. Teachers can print Award Certificates as students complete different levels of the fact grid. The certificates can be shared with parents and uses as examples of student achievement. Also, customized worksheets can be generated that students can bring home as part of the homework that parents can support.</p>
<p>Provide staff with ongoing, high-quality job-embedded professional development that is aligned with the school’s comprehensive instructional program</p>	<p><u><i>FASTT Math Next Generation</i> Implementation Training – Half or Full Day</u> RECOMMENDED—At an additional cost</p> <p>This training examines how <i>FASTT Math Next Generation</i> uses technology to help students achieve math fact fluency and provides teachers with the knowledge and tools to successfully get started with the program, including using the Teacher Dashboard to monitor progress, analyzing reports data to differentiate instruction, identifying key resources and differentiation support in the Teacher’s guide, and using the <i>Scholastic Achievement Manager</i> (SAM).</p> <p><u><i>FASTT Math Interactive Webinar</i></u> RECOMMENDED—At an additional cost</p> <p>In this interactive Webinar teachers, coaches, and administrators learn how to get started with <i>FASTT Math Next Generation</i>, including, understanding the program’s instructional method and underlying research, using the Teacher Dashboard to implement the program with fidelity and monitor progress, and using data to differentiate instruction and target support.</p> <p>Scholastic will also meet with school or district teams to develop a personalized professional development plan that best supports their needs.</p>

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<p>Conduct periodic reviews to ensure that the curriculum is being implemented with fidelity, and is having the intended impact on student achievement</p>	<p><u>In-Classroom Support & Coaching</u> RECOMMENDED—At an additional cost Scholastic offers a yearlong customized plan of in-classroom visits that provides teachers with in-person, individualized support and focused strategies for the classroom. Based upon the Teacher Self-Assessment Form, Scholastic Consultants provide teachers with individualized support and focused strategies side-by-side in the classroom. Our consultants will build relationships with teachers to support on-model implementation, classroom management, program monitoring, and data-driven instruction.</p> <p><u>Data Analytics Services</u> RECOMMENDED—At an additional cost Scholastic will partner with the district to collect and analyze data from the district level down to the individual classroom, and present customized reports and graphs, as needed, to determine next steps. Scholastic experts can help the district to:</p> <ul style="list-style-type: none"> ▪ Use program data to evaluate implementation and make changes for program efficiency and return on instruction investment ▪ Compare and analyze district, school, and classroom growth data and targets ▪ Identify district- or school-level trends and “drill down” to pinpoint specific concerns ▪ Use data for short- and long-range planning for teachers, classrooms, schools, and the district <p>Scholastic Implementation Experts provide the district with feedback on how to improve the implementation of <i>FASTT Math Next Generation</i> or other Scholastic programs in the district. Quarterly Implementation Effectiveness Reports include:</p> <ul style="list-style-type: none"> ▪ Implementation indicators at the class, school, and district levels ▪ Actionable data and recommendations for school and district leaders ▪ Data presentations, as needed
<p>Develop and increase teacher and school leader effectiveness</p>	<p>To improve student achievement, districts need to have a clear vision for teaching and learning, a firm understanding of priorities, and a defined path to accomplish goals. The <i>Scholastic Achievement Partners</i> (SAP) team of proven leadership and instructional specialists can partner with school leaders to help develop and implement an actionable plan for school improvement. SAP services include the following:</p> <p><u>Comprehensive Needs Assessment</u>—During this data-driven planning process, SAP consultants work with school leadership teams to identify the strengths and challenges of a district or school. Working together, goals are established, and measurements to assess implementation are defined. The Needs Assessment includes interviews, focus group discussions, presentations, and a final report.</p> <p style="text-align: right;">CONTINUED</p>

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<p>Develop and increase teacher and school leader effectiveness <i>Continued</i></p>	<p><u>Data Analysis Reporting (DAR)</u>—The Data Analysis Report (DAR) is a longitudinal report that provides an in-depth review of a school or district’s performance measures over the course of the past three years. The data profile provides quantitative evidence of student academic data, demographic information, college readiness indicators, and school characteristics to help identify strengths and areas of need and serves as a starting point for comprehensive school improvement.</p> <p><u>Leadership Institute</u>—SAP can tailor an intensive Leadership Institute that quickly and effectively builds the leadership density of the academic team. Ideal for districts with new leadership or within a district under rapid change, these institutes are delivered over consecutive days and typically held during the summer of scheduled in-service days. The topics are customized to meet the specific needs of the leadership team.</p> <p><u>Foundations of Organizational Leadership</u>—These one-day courses focus on building leadership capacity. Topics include Establishing Structures, Communicating a Shared Vision, Creating a Culture of High Academic Expectations, Using Systemwide Data, Leading Change, Developing and Implementing Rigor and Relevance, as well as Leading Professional Dialogue.</p> <p><u>Foundations of Effective Instruction</u>—These one-day courses focus on building and sustaining teacher effectiveness. Topics include Creating a Rigorous and Relevant Learning Environment, Applying Rigorous and Relevant Instructional Strategies, Using Data to Inform Instruction, and Collaborating for Continuous Professional Learning.</p> <p><u>Leadership Coaching</u>—Highly customized, on-site support with an executive coach helps build leadership capacity through side-by-side, collaborative sessions that guide and support leaders.</p> <p><u>Job-Embedded Instructional Coaching</u>—Results-oriented and holistic in approach, job-embedded instructional coaching supports teachers in meeting the needs of every student by building their skills in learner engagement, academic rigor, and real world relevance. Coaches work with teachers during the regular school day in their classrooms and during planning periods to raise student achievement.</p> <p> For additional information regarding SAP services, please see: http://teacher.scholastic.com/products/scholastic-achievement-partners/#/our-services-section.</p>