





FASTT Math


Aligns to Title I, Part A



The purpose of *Title I, Part A – Improving Basic Programs* is to ensure that children in high-poverty schools meet challenging State academic content and student achievement standards. These schools must develop a comprehensive plan to improve teaching and learning. The following chart shows how **<PRODUCT NAME>** can support a schoolwide *Title I* program. The criteria are drawn from the Federal *Title I Final Rules and Regulations* posted at:


<http://www.ed.gov/policy/elsec/reg/title1/fedregister.html>


Key Criteria for Title I, Part A Funding	 FASTT Math
<ol style="list-style-type: none">1. Provide opportunities for all students to meet the State's proficient and advanced levels of student academic achievement, particularly in the areas of math, reading/language arts, and science	<p>The <i>FASTT Math</i> program uses the research-validated FASTT system to help students develop fluency with basic math facts in addition, subtraction, multiplication, and division. The program automatically differentiates instruction and practice based on each student's individual fluency gaps in customized, 10-minute daily lessons. Developing automatic recall of basic facts allows students to focus on higher order math, such as problem solving and algebra, and have the confidence to succeed in math.</p> <p><i>FASTT Math</i> aligns to the Curriculum Focal Points for number and operations and to the Final Report by the National Math Panel that stresses the importance of developing quick recall of basic math facts in addition and related subtraction facts and multiplication and related division facts. This intervention system provides the targeted dose to fill fluency gaps for students. Additional information can be found at www.tomsnyder.com/standards</p> <p>FASTT Math employs a proven approach called "expanding recall" to help students move newly acquired math facts from working to long-term memory. No more than three new facts are introduced during any given 10-minute session. Students practice holding new facts longer and longer in working memory until they make the leap to automatic retrieval. Developing automatic recall of basic facts provides the foundation needed for later development of higher-order math skills.</p> <p>FASTT Math uses this effective procedure:</p> <ol style="list-style-type: none">1. The student is introduced to two or three non-fluent facts to study. Typically, but only when possible, the session's "Study Facts" appear as a commutative pair. He/she is encouraged to read the facts aloud. The student can also watch an animated representation of each fact to help remind him/her in a more concrete way of what the fact represents. <p style="text-align: right;">(Continued)</p>


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<p>Provide opportunities for all students to meet the State's proficient and advanced levels of student academic achievement, Continued</p>	<ol style="list-style-type: none"> 2. After seeing and speaking the new "Study Facts," the student is asked to type each number sentence into the computer. If he/she fails to type the facts correctly, the facts are redisplayed, and the process is repeated. This helps establish a memory relationship with the fact in the student's mind. 3. Once the student can correctly type the number sentences of the new "Study Facts," the program then presents a practice session with these facts. The program mixes presentations of the two "Study Facts" with a gradually increasing number of fluent facts. The student builds the capacity to hold the fact in memory for a longer and longer period of time. FASTT Math limits the allowed response time to prevent the student from employing non-automated strategies. 4. When the student is able to recall the current "Study Facts" consistently, the facts are added as "Focus Facts" to the student's Fact Grid. The software provides extra practice to help the students solidify them in memory and increase recall speed. 5. Once a student is able to recall his or her "Focus Facts" in less than .8 of a second, those "Focus Facts" are changed to "Fast Facts" on the student's Fact Grid. <p>FASTT Math also provides students with customized worksheets to practice their math facts in a paper-and-pencil format. Teachers can print problems in a vertical or horizontal format and in single- and multi-digit operations. These worksheets only include the math facts that a student is fluent with or is currently studying.</p>
<ol style="list-style-type: none"> 2. Address the needs of all students in the school, particularly the needs of low-achieving students and those at risk of not meeting the State's student academic standards 	<p>FASTT Math improves math fact fluency for all students, including those who are struggling and at-risk of not meeting state academic standards. These include, but are not limited to:</p> <ul style="list-style-type: none"> ▪ Children from low-income families ▪ Students with disabilities ▪ English-Language Learners ▪ Students attending urban, suburban, and rural schools <p style="text-align: right;">(Continued)</p>

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<p>Address the needs of all students in the school, particularly the needs of low-achieving students and those at risk of not meeting the State's student academic standards Continued</p>	<p><u>English-Language Learners</u></p> <p><i>FASTT Math</i> contains software features that support English-Language Learners' development of math fact fluency. Math problems can be spoken aloud in English and Spanish. Students can listen repeatedly to any instructions they may have missed. The number of problems presented during instruction can be reduced for students who need more time to absorb new information. Students develop listening and speaking skills as they listen to instructions and say aloud new study facts.</p> <p><u>Students with disabilities</u></p> <p>The <i>FASTT Math</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>3. Close the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers.</p>	<p>Through <i>FASTT Math's</i> adaptive technology, all students can receive the targeted instruction and systematic, repetitive practice they need to develop accurate and automatic recall of facts. Research has shown that <i>FASTT Math</i> is especially effective for students with mild disabilities and those who are at risk of school failure.</p> <p>Designed for students in Grades Two and above, <i>FASTT Math</i> can be implemented in a variety of settings—before- or after-school programs, daily math instruction, computer lab, pull-out programs, or summer school. In the classroom, students can quickly and independently rotate onto classroom computers for <i>FASTT Math</i> every day. In computer labs, teachers can allocate 10-15 minutes of lab time of <i>FASTT Math</i> for the whole class or small groups.</p> <p>At the beginning of the <i>FASTT Math</i> program, students take a placement quiz to determine his/her baseline fact fluency. Then the software provides systematic, adaptive instruction, practice, and review of facts to fill the gaps.</p> <p style="text-align: right;">(Continued)</p>

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<p>Close the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers. Continued</p>	<p><i>FASTT Math</i> complements the core math program, and can be implemented into the daily schedule:</p> <ul style="list-style-type: none"> ▪ Before-school math program ▪ During homeroom ▪ Daily instructional math block ▪ Computer lab periods ▪ Targeted after-school programs ▪ Pull-out intervention ▪ Summer school
<p>4. Use effective methods and instructional practices that are based on scientifically based research and that:</p> <ul style="list-style-type: none"> ▪ Strengthen the core academic program ▪ Provide an enriched and accelerated curriculum ▪ Increase the amount and quality of learning time, such as providing an extended school year, before- and after-school programs, and summer programs and opportunities 	<p>Dr. Ted Hasselbring, professor in the Department of Special Education at the Peabody College of Vanderbilt University and former William T. Bryan Professor and Endowed Chair in Special Education Technology at the University of Kentucky and Laura Goin, Chief Executive Officer of Designs for Learning, developed <i>FASTT Math</i> for students in need of assistance with developing fact fluency, based on two decades of research. Dr. Hasselbring has an extensive background designing technology programs aimed at helping students with learning disabilities and those who have been identified as at-risk.</p> <p>The <i>FASTT Math</i> approach has been validated over several years of research with both struggling and non-struggling students. Studies involving more than 400 students have demonstrated that the <i>FASTT Math</i> approach can be extremely powerful for developing fluency with basic math facts. Students who used the program regularly did better than students who were only occasional users.</p> <p> The <i>Research Foundation & Evidence of Effectiveness for FASTT Math</i> provides specific information on the research for the program. Please contact your Scholastic Account Executive to request a copy.</p> <p>Strengthen the core academic program</p> <p><i>FASTT Math</i> consists of two programs: the <i>FASTT Math</i> student software and <i>Scholastic Achievement Manager</i> (SAM), which is the learning management system for <i>FASTT Math</i>. <i>FASTT Math</i> is designed to help a student develop fluency with basic math facts in addition, subtraction, multiplication, and division, in number ranges 0-9 or 0-12. The program begins by assessing the student's current fluency of facts (correct and fast answers). It then provides adaptive instruction to help him or her build a memory relationship between a problem and its answer and increase the speed at which the student responds to problems.</p> <p style="text-align: right;">(Continued)</p>

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<p>Use effective methods and instructional practices that are based on scientifically based research, Continued</p>	<p>The <i>FASTT Math</i> student software leads the student through a linear path of instruction and assessment. As part of the daily lesson, the student will be given a customized assignment; for example, to study new facts. In addition, the student will be required to complete one practice game per day. Each lesson should take about ten minutes to complete. <i>FASTT Math</i> has nine engaging practice games of two different types, as follows:</p> <p><u>Game Type One:</u> Five objects move continuously from one end of the screen to the other. Each object is linked to a math fact. The goal of the game is to answer each fact as fast as possible to keep the objects from reaching the other end of the screen. Correct responses are awarded points.</p> <p><u>Game Type Two:</u> Three facts are linked to one object moving from one end of the screen to the other. The faster the student answers each fact the faster the object moves. Correct responses are awarded points and bonus points.</p> <p>Provide an enriched and accelerated curriculum</p> <p><i>FASTT Math's</i> technology embodies unique design features that help math-delayed children develop mathematical fluency. The program:</p> <ul style="list-style-type: none"> ▪ Individualizes instruction, practice and review based on students' responses ▪ Assesses and focuses instruction on facts a student doesn't know ▪ Presents small, manageable amounts of new information ▪ Requires recall from memory by controlling response time ▪ Presents new information using the systematic "expanding recall" model ▪ Provides corrective feedback during instruction ▪ Generates customized worksheets that include the math facts that a student is fluent with or is currently studying <p>The <i>FASTT Math</i> software has built-in features to recognize the progress that students make and reward their hard work.</p> <ul style="list-style-type: none"> ▪ Students feel a deep sense of accomplishment as they master math facts recorded on their Fact Grid. ▪ The program divides the facts in the Fact Grid into levels. Each level that students achieve adds more choices for customizing the interface of their "Fast Tracker" device. ▪ When a student reaches a new level in the software, the <i>FASTT Math Manager</i> notifies the teacher, who can print out an award certificate. <p style="text-align: right;">(Continued)</p>

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<p>Use effective methods and instructional practices that are based on scientifically based research, Continued</p>	<ul style="list-style-type: none"> When students are learning new facts or playing a game, they are rewarded with points. Students compete with their own previous scores, which focuses them on progressive self-improvement. The program provides a certificate students can print out when they have completed all the facts in the operation <p>Increase the amount and quality of learning time</p> <p>The <i>FASTT Math</i> system delivers individualized instruction and targeted practices that address the diverse needs of all students. With adaptive technology, independent practice, and the additional interventions included in the <i>Fact Fluency Foundations Guide</i>, the gaps in each student's number knowledge are identified and filled. Moreover, the assessments and reports embedded in the program promote the practices of screening students, identifying those who require support in developing fact fluency and providing the exact instruction that each one needs, offering ongoing progress monitoring, and producing actionable reports.</p>
<p>5. Provide high-quality and ongoing professional development that aligns with the State's academic standards</p>	<p>Scholastic will provide a half-day in-person implementation training for teachers. This training examines how <i>FASTT Math</i> teaches automaticity and fluency and provides teachers with all the tools to successfully get started with the program. Participants learn how to implement the <i>FASTT Math</i> instructional model, use report data to monitor progress and individualize instruction, and integrate <i>FASTT Math</i> into the existing mathematics curriculum.</p>
<p>6. Involve parents in the planning, review, and improvement of the schoolwide program plan</p>	<p>The <i>FASTT Math</i> program has the following parent support materials:</p> <ul style="list-style-type: none"> Parent letter in English or Spanish that introduces the <i>FASTT Math</i> program to parents and lets them know that students can readily share their progress. Student Fact Grid reports provide a copy of a student's fact grid displaying the student's fluency status with all facts in the operation. Award Certificates can be printed as students complete different levels of the fact grid. The certificates can be shared with parents and uses as examples of student achievement. <p>Customized worksheets can be generated that students can bring home as part of the homework that parents can support.</p>

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7. If appropriate, coordinate with other funding programs	<p>FASTT Math can be integrated with specific technology-related school activities using <i>Ed Tech</i> funds and money from state, local, foundation, and other sources. The federal funding programs for which FASTT Math qualifies include:</p> <ul style="list-style-type: none">▪ Title I, Part A – Improving Basic Programs▪ Title I – Supplemental Educational Services▪ Title III—English Language Acquisition▪ 21st Century Community Learning Centers▪ Comprehensive School Reform▪ GEAR Up▪ IDEA, Part B▪ IDEA, <i>Response to Intervention</i>