



Created by
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Do The Math



Aligns to 21st Century Community Learning Centers Criteria


The purpose of the *21st Century Community Learning Centers* (21st CCLC) program is to create community learning centers that provide academic enrichment opportunities for children, particularly students who attend high-poverty and low-performing schools, to meet State and local student standards in core academic subjects, to offer students a broad array of enrichment activities that can complement their regular academic programs, and to offer literacy and other educational services to the families of participating children. The following chart details how *Do The Math* can support the development of a 21st CCLC program. The criteria are drawn from the federal *21st Century Community Learning Centers Non-Regulatory Guidance*.



Key Criteria for 21 st CCLC Programs	📖 Do The Math
<p>1. Activities that provide remedial education and academic enrichment to improve academic achievement</p>	<p>Focusing on numbers and operations—the cornerstone of elementary math education—<i>Do The Math</i> helps students in grades 2-8 build a solid foundation in computation, number sense, and problem solving for immediate and long-term learning. The program addresses the diverse needs of all students. Incorporating research-based instructional strategies to specifically meet the needs of students who struggle with math, the program helps students to gain necessary conceptual understanding of addition, subtraction, multiplication, division, and fractions.</p> <p><i>Do The Math</i> consists of 12 modules that target addition and subtraction, multiplication, division, and fractions. Each module includes a series of thirty, 30-minute step-by-step lessons. The proven instructional strategies include:</p> <ul style="list-style-type: none"> ▪ Well organized, manageable lessons that help students build a solid foundation of understanding ▪ Explicit, intentional instruction based on teaching for understanding ▪ Multiple strategies used for developing concepts and skills ▪ Four-phase pedagogy built on gradual release that prepares students for individual success ▪ Student interaction that deepens the connections students make to the skills and strategies ▪ Motivating practice that provides students the opportunity to strengthen and extend their learning ▪ Vocabulary instruction that helps students develop effective communication and understanding about math ▪ Ongoing assessment that allows teachers to differentiate instruction


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<p>2. Activities for limited English proficient students that emphasize language skills and academic achievement</p>	<p><i>Do The Math</i> is an intervention program for Grades 2-8 that can be used with any core math curriculum. The program is intended to help struggling students catch up and keep up with grade-level math skills and standards by helping students develop number sense, computation, and problem solving skills. The twelve modules target Addition & Subtraction, Multiplication, Division, and Fractions.</p> <p><u>English-Language Learners</u></p> <p><i>Do the Math</i> is designed to grant maximum access and success for English-Language Learners, with an emphasis on language development, the incorporation of visual representations and directions, and consistency across all instructional routines.</p> <ul style="list-style-type: none"> ▪ The four-phase gradual release model prepares students for individual success and ensures that they are prepared to complete their work independently. Routines are will established so English-Language Learners can focus on the content and not the process of the assignment. ▪ Numerous structured opportunities for students to engage in meaningful conversations about math are embedded throughout the program to support intentional vocabulary and language development, while increasing access to content. Working in pairs allows for English-Language Learners to speak in their first language in order to understand the task at hand before practicing articulating their solution in English when they share with the larger group. ▪ “Built-in-Differentiation” notes on each planner page summarize for teachers some of the important key practices use din each lesson that support English-Language Learners. ▪ Visual tools, such as visual representations of mathematical concepts, visual directions in the student <i>WorkSpace</i>, visual representations of manipulatives, and the visual connections to mathematics in children’s literature all support students who second language is English. ▪ Math vocabulary is explicitly taught using a consistent routine. Every lesson includes a sidebar that highlights the key math and academic vocabulary used in each lesson along with the Spanish translation of each word or phrase. Language Development boxes provide further explanation and additional support.

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<p>3. Activities involving telecommunications and technology education programs</p>	<p>The <i>Do The Math Interactive Whiteboard Tools</i> provide all the demonstration tools and <i>WorkSpace</i> pages that teachers need to teach the lesson in the program. The easy-to-use tools work on all interactive whiteboards and are designed to use with large groups of students or with the whole class. Students can easily view the <i>Do The Math Interactive Whiteboard Tools</i> no matter where they are sitting in the classroom. While the tools do not replace the hands-on manipulatives, teachers can use them in a similar way on a whiteboard.</p>
<p>4. Activities to promote parental involvement and family literacy</p>	<p><i>Do The Math</i> offers a <i>Community Newsletter</i>, available in English and Spanish that is sent home after every fifth lesson. Through this ongoing communication, parents are informed of the topics and concepts that have been presented in the classroom. The newsletter also includes suggested activities and practice games for students to try at home. In addition, teachers can share <i>WorkSpace</i> pages and assessment results with parents.</p>
<p>5. Programs that provide assistance to students who have been truant, suspended, or expelled to allow the students to improve their academic achievement</p>	<p>In <i>Do The Math</i> explicit instruction utilizes scaffolded content and is designed to support students' learning as they see visual models, connect those models and concepts to their mathematical representations, and while they learn appropriate mathematical and academic language. <i>Do The Math</i> lessons engage students with concepts and skills using concrete manipulative materials, games that reinforce and provide practice, selected children's literature that provides a context for mathematical concepts and skills, and visual representations to help students represent their thinking.</p>

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<p>6. Programs and activities that follow <i>principles of effectiveness</i> by being based on:</p> <ul style="list-style-type: none"> ▪ Assessment of objective data regarding need for before- and after-school programs ▪ Established set of performance measures aimed at ensuring the availability of high-quality academic enrichment opportunities ▪ If appropriate, scientifically based research that provides evidence that the program or activity will help students meet state and local achievement standards 	<p>The most recent National Assessment of Education Progress (NAEP) data indicates that two-thirds of students are scoring at or below basic as measured by the NAEP Mathematics test. Furthermore, the gap in performance between AYP subgroups continues and in some grade levels widens significantly. <i>Do The Math</i> is a research-based math intervention program designed to support students who are struggling with elementary arithmetic. The program was developed to address the growing national concern regarding mathematics performance as evidenced by the NAEP results.</p> <p>The National Mathematics Advisory Panel’s Final Report (2008) states that to “prepare students for algebra, the curriculum must simultaneously develop conceptual understanding, computational fluency, and problem-solving skills.” With a focus on Number and Operations, the cornerstone of elementary Math education and a critical foundation of Algebra, <i>Do The Math</i> supports students in building a strong foundation in computation, number sense, and problem solving. <i>Do The Math</i> is based on these eight proven instructional strategies—scaffolded content, explicit instruction, multiple strategies, gradual release, student interaction, meaningful practice, systematic vocabulary and language development, and effective assessment and differentiation.</p> <p> <i>Do The Math—Arithmetic Intervention by Marilyn Burns, A Summary of the Research</i> provides specific information regarding the research foundation for the program.</p> <p><i>Do The Math</i> includes processes and materials that scientifically-based research has shown to be effective in increasing academic achievement. The program, which reflects <i>National Council of Mathematics</i> (NCTM) standards, teaches essential Numbers and Operations math skills that integrate with a core math curriculum. Step-by-step lessons help students develop understanding, learn skills, see relationships, and make connections. Students develop the skills they need to compute with accuracy and efficiency, the number sense they need to reason, and the ability to apply their skills and reasoning to solve problems. Learning experiences link concepts and skills to their mathematical representations and language.</p> <p style="text-align: right;"><i>(Continued)</i></p>

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<p>Programs and activities that follow <i>principles of effectiveness</i> Continued</p>	<p>A four-phase pedagogy built on gradual release prepares students for individual success.</p> <ol style="list-style-type: none"> 1. <u>Phase One</u>—The teacher models and records the mathematical representation on the board. 2. <u>Phase Two</u>—The teacher models again, now eliciting responses from students, and again records on the board. 3. <u>Phase Three</u>—Students work in pairs to do the mathematics and then the teacher, once again, records on the board. 4. <u>Phase Four</u>—Students work independently, monitored and supported by the teacher. <p>Multiple strategies for developing concepts and skills support student learning. Lessons engage students with each concept and skill in several ways, deepening their mathematics knowledge. Manipulative materials provide students concrete experiences with abstract ideas. Games offer engaging situations where mathematical understandings and skills are reinforced. Children’s literature provides a springboard for instruction. Contexts make abstract mathematical ideas accessible.</p>
<p>7. The eligible entity has experience or promise of success in providing educational and related activities that will complement and enhance the academic performance, achievement, and positive youth development of the students.</p>	<p><i>Do The Math</i> was developed in collaboration with schools across the country and represents Marilyn Burns’ and her professional development company’s, <i>Math Solutions</i>, life work regarding the tools teachers need to be effective and the foundation in math that students need to be successful. From 2005 to 2006, Marilyn and a team of <i>Math Solutions</i> Master Classroom Teachers spent over two years drafting, testing, debating, and refining the lessons in the program within classrooms across the country. In 2007-2008, Scholastic published <i>Do The Math</i> and entered into several partnerships with large districts to document the efficacy of the program.</p> <p>Over the course of the spring of 2008 (from January 30th-June 15th), research was conducted on the implementation and impact of <i>Do The Math</i> in six schools in New York City. Scholastic partnered with the New York City Department of Education (NY DOE) to select schools where the city’s diverse student population would be represented and where the program could be implemented with fidelity. Half were general education elementary schools, and half were within District 75 schools, a district that serves students with special needs. In whole class or small groups, students were instructed using one or two of the <i>Do The Math</i> multiplication modules.</p> <p style="text-align: right;"><i>(Continued)</i></p>

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<p>The eligible entity has experience or promise of success in providing educational and related activities that will complement and enhance the academic performance, achievement, and positive youth development of the students.</p> <p>Continued</p>	<p>The <i>Do The Math</i> research study reveals positive results for students who struggle with elementary math, as well as for the schools and teachers that are working with them. The four-month-long study showed that diverse populations of students in grades three through six who received instruction in one of the Multiplication modules (either A or B), including students with special needs, English-Language Learners, and General Elementary school students identified as at-risk, made statistically significant gains on the program’s End-of-Module Assessment, and acquired the key math vocabulary presented in the program. In addition, it showed that students’ confidence in themselves as math learners improved from the time when they began the program until they finished it.</p> <p> The <i>Do The Math—Math Intervention in New York City Schools</i> Impact Study is available upon request.</p>
<p>8. To sustain a quality program, staff delivering academic support and enrichment services should be provided ongoing training and learning opportunities.</p>	<p><i>Do the Math</i> offers a variety of professional development solutions:</p> <p><u><i>Do The Math</i> Implementation Training</u></p> <p>This half-day training helps teachers to successfully get started using the program in their classrooms. They will learn how to effectively use the program, including:</p> <ul style="list-style-type: none"> ▪ Navigating the program materials and exploring how they address current issues in math intervention ▪ Experiencing the pace of a <i>Do The Math</i> module with tips for implementing instructional strategies ▪ Assessing student progress and learning how to differentiate instruction ▪ Reviewing ongoing math professional development opportunities <p><u>Embedded Professional Development</u></p> <p>The <i>Teacher Guide</i> provided for each module of the program provides step-by-step teaching instructions, clear models, modified scripting, and guidance for monitoring student progress. Supporting Instruction, Language Development, and Mathematical Background boxes at point-of-use provide professional information that helps prevent learning, and well as teaching stumbling blocks.</p>

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9. Academic activities are aligned with the school's curriculum in the core subject areas.	<p><i>Do The Math</i> focuses on the most essential topics in Number and Operations, all of which are sequenced, paced appropriately, and presented in ways that are accessible for struggling students. Unlike most textbooks, which cover a broad range of topics and treat all equally, <i>Do The Math</i> focuses on core concepts and skills that are essential to long-term success. <i>Do The Math</i> consists of twelve modules that cover addition, subtraction, multiplication, division, and fractions. Students receive instruction in the topic that aligns to their grade level, their performance, or the goals of their Individualized Education Plans (IEPs).</p>
10. Program was developed and will be carried out in active collaboration with the schools the students attend.	<p><i>Do The Math</i> provides various opportunities for teachers to collect and use data to inform and target their instruction in order to meet all of their students' diverse needs. Teachers record students' progress monitoring results on a copy of the Objectives Tracker found at the back of each module's Teacher Guide. The tracker is provided so that teachers may document students' progress at meeting each module objective by recording the date when the student consistently performed the objective with accuracy. Students complete a Beginning-of-Module Assessment as a pre-module snapshot of what they know. Upon completion of the module, administering the End-of-Module Assessment provides the teacher with documentation for mathematical growth in skill and understanding demonstrated by each student.</p>
11. The program includes a plan for how the community learning center will continue after funding under this part ends.	<p><i>Do The Math</i> can be integrated with funds from state, local, and other sources. The federal funding programs for which it qualifies include:</p> <ul style="list-style-type: none"> ▪ Title IA—Improving Basic Programs ▪ Title IA—Supplemental Educational Services ▪ Title III—English Language Acquisition ▪ 21st Century Community Learning Centers ▪ IDEA, Part B ▪ IDEA, <i>Response to Intervention</i>
12. The program or activity shall undergo a periodic evaluation to assess its progress toward achieving its goal of providing high-quality opportunities for academic enrichment.	<p><i>Do the Math</i> has a Beginning-of-Module Assessment for each of its twelve modules. The Beginning-of-Module Assessment, administered prior to instruction, is given to students that the teacher has identified as needing instruction on that particular topic. The assessment will reveal what students know in regard to the topic content for that module. The first few questions on the assessment will inform whether the student has the prerequisite skills support for that module. If not, the student will need additional support before beginning that module.</p> <p style="text-align: right;"><i>(Continued)</i></p>

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<p>The program or activity shall undergo a periodic evaluation to assess its progress toward achieving its goal of providing high-quality opportunities for academic enrichment. Continued</p>	<p>Additional support may mean moving the student into another module. Each module also includes an End-of-Module Assessment with questions similar to the Beginning-of-Module Assessment so that the teacher can measure student growth.</p> <p><i>Do the Math</i> also includes several periodic assessments that check student progress and help teachers adjust instruction accordingly. Progress monitoring in the form of a written formative assessment occurs after every fifth lesson so teachers can quickly identify and provide immediate support. During every fifth lesson, students independently complete a written assessment which mirrors what they have been working on in the previous four lessons. Teachers then use the results to select and implement the suggestions for differentiation included in the program and make decisions about targeting instruction according to each student's needs.</p> <p>Formative Assessment through daily observations is built into the program so students receive the proper attention and differentiation required to enable them to develop conceptual understanding and skills successfully. Supporting instruction boxes appear frequently to highlight opportunities for teachers to observe student understanding and provide additional support.</p>