



Scholastic *Do The Math*

Do The Math, created by Marilyn Burns, gives students who have fallen behind a chance to catch up and keep up. Focusing on numbers and operations—the cornerstone of elementary Math education—*Do The Math* 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, which reflects *National Council of Mathematics (NCTM)* standards, teaches essential Numbers and Operations math skills that integrate with a core math curriculum.

Instructional Content

Do The Math consists of 13 modules that target addition and subtraction, multiplication, division, and fractions. Each module includes a series of thirty, 30-minute step-by-step lessons, which offer multiple strategies to enable students to build a solid foundation of understanding. To achieve optimal learning, students gradually progress through the program in a four-phase pedagogy in which teachers model the mathematical representation on the board and guide the students toward working independently with monitored support from the teacher. Further, in *Do The Math*, student interaction occurs in whole group, small group, and pairs as students work together to solve problems, play games, and explain their thinking.

In addition, the Common Core State Standards key points for mathematics state Kindergarten and 1st grade mathematics should focus on the “number core,” which they define as understanding how numbers correspond to quantities and how to put numbers together and take them apart (the beginnings of addition and subtraction). To meet these standards, a Number Core module has been integrated into *Do The Math*, and focuses on multiple ways to represent the quantity of 5 and later make sums to 10.

Instructional Design

Do The Math includes processes and materials that scientifically-based research has shown to be effective in increasing academic achievement. The program, which reflects *National Council of Mathematics (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. A four-phase pedagogy built on gradual release prepares students for individual success.


1. Phase One—The teacher models and records the mathematical representation on the board.
2. Phase Two—The teacher models again, elicits responses from students, and records on the board.
3. Phase Three—Students work in pairs to do the mathematics and the teacher records on the board.
4. Phase Four—Students work independently, monitored and supported by the teacher.

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.

The *Do The Math* Interactive Whiteboard Tools are a series of interactive whiteboard tools that turn math lessons into engaging and visual experiences. These tools support instruction in all four program strands—Addition & Subtraction, Multiplication, Division, and Fractions. The easy-to-use demonstration tools are ideal for small- or whole-group instruction and can be used on any whiteboard or classroom computer to help students better visualize math concepts and skills.

Do The Math Interactive Whiteboard Tools are completely integrated with the curriculum. When the teacher clicks on the Main Menu he or she gets a list of lessons rather than a list of tools. As the teacher teaches the lesson using the *Do The Math* Teacher's Guide, he or she clicks on the appropriate tool, activity, or game, each of which is described in the print lesson. The tools are not an addition or supplement to the lesson, they are an integral part of the lesson. The tools can also be used flexibly and independently. The tools were created so that the teacher could use the program effectively for whole class instruction or with larger groups of students.

The *Do The Math* Interactive Whiteboard Tools meet the needs of teachers who aim to use technology to motivate, encourage, and help change students' attitudes towards math. Because today's students are technology-oriented, the tools reach students who are not successful at traditional paper and pencil math computation. Teachers and students are able to write equations with whole numbers and fractions, draw lines, draw open number lines, and more on the interactive whiteboard. This feature allows teachers to maintain flexibility when recording students' responses and model their thought processes. The interactive tools can be used with whole-class instruction, as well as small-group instruction.

 For more information about the *Do The Math* Interactive Whiteboard Tools, please refer to: <http://teacher.scholastic.com/products/dothemath/interactivewhiteboards.htm>.

Assessment & Progress Monitoring

Do The Math includes both embedded progress monitoring, as well as formative and summative assessments that allow teachers to continuously evaluate student understanding and monitor their progress. Ongoing assessment is built into *Do The Math* as students use their *WorkSpace* during each lesson to follow along with lessons and to practice learned concepts and skills on a daily basis. During every fifth lesson, on a weekly basis, students complete the *Show What You Know WorkSpace* assignment to demonstrate understanding of the math content from the previous four lessons. After students complete the *Show What You Know* assignment, teachers can formally assess understanding of skills and concepts from the previous four lessons.

In addition, assessments are administered through the computer-based *ProgressSpace* assessments at the beginning and end of each module and semester to assess understanding and monitor student progress over time.

- **Beginning-of-Module Assessments**—Administered at the start of each *Do The Math* module to capture students' baseline scores and understanding of foundational math skills
- **Formative Assessment**—Daily observations give students the prompt attention that will enable them to complete math assignments successfully.
- **Progress Monitoring**, which occurs every fifth lesson, is followed by suggestions for differentiating instruction for students who need additional support and those ready for a challenge.
- **End-of-Module Assessments**—Administered at the end of each *Do The Math* module to enable teachers to track and monitor student progress over the course of 30 lessons

All assessments in *Do The Math* are administered in *ProgressSpace*, the online assessment and reporting component. With *ProgressSpace*, all curriculum embedded assessments are web-based and customized to meet students' needs. Three easy-to-generate, actionable reports and a student test printout allow teachers to evaluate student understanding and measure growth. The Student Progress Report shows growth at the individual student level, the Grading Report shows performance at a class, grade, or school level, and the Response to Intervention report displays program performance at the school or district level.

Scaffolded Instruction

Do The Math 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 modules target Addition & Subtraction, Multiplication, Division, and Fractions.

Strategies for English Language Learners

Do the Math 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.

- The four-phase gradual release model prepares students for individual success and ensures that they are prepared to complete their work independently. Routines are well 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 used in each lesson that support English-Language Learners.
- Visual tools, such as visual representations of mathematical concepts, visual directions in the student *WorkSpace*, visual representations of manipulatives, and the visual connections to mathematics in children’s literature all support students whose 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. Language Development boxes provide further explanation and additional support.
- All communication to parents is available in Spanish through the *Community News* located on the *TeacherSpace* CD-ROM. Through this ongoing communication, parents are informed of the topics and concepts that have been presented in the classroom. The *Community News* also includes suggested activities for students to try at home.

Strategies for Special Education Students

Because *Do The Math* was developed to meet a diverse range of student needs, the lessons include suggestions for differentiating based on student need. The struggling reader has vocabulary support and visual directions to ensure that reading difficulties do not contribute to their struggle with math. Techniques for maintaining student engagement are integrated into lessons to keep students engaged. Visual and hands-on representations of math concepts support students who need support beyond abstract or auditory methods. Students who are still developing language skills benefit from the scripting provided for the teacher that avoids complex sentence structure, maintains consistent vocabulary use, and attends to language development opportunities.

Created as an intervention for struggling students, *Do The Math* is also organized around lessons that engage students with each concept and skill in several ways, deepening their mathematics knowledge. Manipulative materials provide students with 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.

Motivation & Engagement

In *Do The Math* 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. *Do The Math* 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.


Home-School Connection

Do The Math offers a *Community Newsletter*, 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 *WorkSpace* pages and assessment results with parents.

Professional Development

***Do The Math* Implementation Training**

This half- or full-day training helps teachers get started using the program in the classroom. Participants learn how to effectively use *Do The Math*, including navigating the program materials, experiencing the pace of a *Do the Math* module with tips for implementing instructional strategies, assessing student progress, and learning how to differentiate instruction.

 For more information about *Do The Math*, please refer to www.scholastic.com/dothemath.