



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 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:

- 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 to help students develop effective communication and understanding about math
- Ongoing assessment that allows teachers to differentiate instruction

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.

Assessments

Do the Math has a Beginning-of-Module Assessment for each of its twelve modules. Through a mix of multiple choice and open-ended questions, it yields results and information that help teachers determine which students are in need of more intense interventions. 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 for that module. If not, the student will need additional support before beginning that module. 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.

Do the Math 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.

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.

Motivation and 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.

Differentiated Instructional Strategies

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 twelve 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 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 *WorkSpace*, 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.
- 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 insure 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.

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 provides comprehensive professional development support for teachers that is woven throughout the program. Embedded professional development is provided in the Teacher Guide, including all the information needed for preparing to teach the lesson, step-by-step teaching instructions, and guidance for monitoring student progress. Supporting Instruction, Language Development, and Mathematical Background boxes at point-of-use provide professional information that help prevent teaching stumbling blocks. The *TeacherSpace*[™] helps organize professional materials and includes a CD-ROM with videos, reproducibles, and professional articles.

The Scholastic Implementation Training is a half-day in-person implementation training for teachers. The objectives for this training are to understand how *Do The Math* addresses current issues in math intervention, review the program materials, and participate in a *Do The Math* model lesson. Teachers will also learn the pace of a module and practice intervention strategies, learn how to assess understanding and differentiate instruction, as well as develop a plan to implement *Do The Math*.

 For additional information about *Do The Math*, visit www.scholastic.com/dothemath.