NARRATIVE PROFILE

*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 build a solid foundation in computation, number sense, and problem solving for immediate and long-term learning. The program teaches essential number and operations math skills that integrate with any core math curriculum. It was originally developed as an intervention resource, but teachers have been successful using it as a prevention strategy as well.

EVIDENCE BASE/EFFICACY

*Do The Math* represents Marilyn Burns’ body of work in teaching and learning mathematics. The program incorporates eight instructional strategies drawn from research including scaffolding content, explicit instruction, multiple strategies, gradual release, student interaction, meaningful practice, vocabulary and language, and assessment and differentiation. Research studies for *Do The Math* meet the moderate evidence level as defined by the Every Student Succeeds Act (ESSA). For additional research and efficacy information, please visit: [www.hmhco.com/research/library](http://www.hmhco.com/research/library).

MOTIVATION & ENGAGEMENT

*Do The Math* is organized around lessons that 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 understanding and skills are reinforced. Children’s literature provides a springboard for instruction.

In the program, student interaction occurs in whole groups, small groups, and pairs as students work together to solve problems, play games, and explain their thinking. Think, Pair, Share provides a safe way for students to share ideas, clarify thinking, and prepare for class discussions. Lessons prompt teachers to partner students as they complete independent WorkSpace® assignments. Partner games encourage active engagement and mathematical communication.

SOCIAL EMOTIONAL LEARNING (SEL)

*Do The Math* offers hands-on learning designed to encourage engagement and communication among students. Classroom routines such as “think, pair, share” promote social engagement, teamwork, self-awareness, and respect for others. Independent student work provides opportunities to practice, strengthen, and extend students’ self-awareness and self-management skills.

* HMH’s evidence ratings are based on the U.S. Department of Education’s non-regulatory guidance for ESSA. Evidence ratings issued by clearinghouses and independent research agencies (e.g. Evidence for ESSA) may differ due to varying criteria used to judge evidence.
INSTRUCTIONAL FOCUS

*Do The Math* consists of thirteen modules that target addition and subtraction, multiplication, division, and fractions. Each module includes a series of thirty, thirty minute step-by-step lessons. The modular design gives the program the flexibility to span multiple grades.

The proven instructional strategies include the following:

- **Well-organized, manageable lessons** that help students build a solid foundation
- **Explicit, intentional instruction** based on teaching for understanding
- **Multiple strategies** used to develop 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 communication and understanding about math
- **Ongoing assessment** that allows teachers to differentiate instruction

INSTRUCTIONAL DESIGN

*Do The Math* includes processes and materials based on scientific research proven to be effective in increasing academic achievement. The program, which reflects National Council of Teachers of Mathematics (NCTM) standards, teaches essential number 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 exercises 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 comprehension 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 (*mTools*) turn math lessons into engaging visual experiences. These tools support instruction in all four program strands—addition and 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.
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The digital student experience is intuitive and increases student engagement. With Student Central, all of your students’ favorite games and hands-on materials are now available digitally on tablets to provide additional practice along with access to Progress Space, an online assessment and reporting tool.

**ASSESSMENT & PROGRESS MONITORING**

*Do The Math* includes both embedded progress monitoring and formative and summative assessments that allow teachers to evaluate student understanding and continuously monitor their progress.

- **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** – 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 thirty lessons

All assessments in the program are administered in ProgressSpace™, the online assessment and reporting component customized to meet students’ needs. Three easy-to-generate, actionable reports and a student test printout allow teachers to evaluate student understanding and 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.

**DIFFERENTIATED INSTRUCTION**

*Do The Math* 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 thirteen modules target addition and subtraction, multiplication, division, and fractions.

**STRATEGIES FOR ENGLISH LEARNERS**

*Do the Math* is designed to grant maximum access and success to English 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 they are prepared to complete their work independently. Routines are well established so English 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 English learners to speak their first language 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 to support English learners.
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- **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.

- **Communication to parents** is available in Spanish through the Community News located in HMH Teacher Central™. 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 differentiation based on student need. The struggling reader has vocabulary support and visual directions to insure reading difficulties do not contribute to his or her 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 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 for abstract ideas. Games offer engaging situations where mathematical understanding and skills are reinforced. Children’s literature provides a springboard for instruction. Contexts make abstract mathematical ideas accessible.

**STRATEGIES FOR RESPONSE TO INTERVENTION**

*Do The Math* can be used flexibly by educators within a variety of instructional models that address any one of the three tiers of service delivery within Response to Intervention. For Tier One, students receive core instructional intervention that is preventive and proactive. *Do The Math* offers a way to strengthen any core math program by providing the targeted instruction required in addition, subtraction, multiplication, division, and fractions. Unlike most core programs, which typically cover a broad range of topics, *Do The Math* modules focus on the concepts and skills essential to long-term student success.

Tier Two is characterized by targeted group interventions for students who are considered to be at risk. *Do The Math* addresses the needs of students who struggle with core math learning by offering scaffolded instruction paced specifically to meet their needs as well as proven instructional strategies. Explicit step-by-step instruction anticipates common sources of confusion, and the gradual release pedagogy at the core of the program helps all students to move from dependence to independence. In addition, the Beginning-of-Module Assessment reveals a baseline of what students know, and the End-of-Module Assessment shows whether they have mastered the set of objectives taught. After every five lessons, Progress Monitoring Assessments reveal students’ growth so teachers can immediately differentiate their needs.

Tier Three students are typically individual students who do not respond to the instruction provided in Tiers One and Two. *Do The Math* is paced specifically for students who are not achieving success in math. Assessments and student work allow a teacher to monitor a student’s progress and reveal his or
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her misconceptions and misunderstandings. Formative assessment through daily observations allows teachers to observe students and provide prompt attention. Progress monitoring, which occurs every fifth lesson, is followed by suggestions for differentiating instruction.

SCHOOL-TO-HOME CONNECTION

Do The Math offers a Community Newsletter, available in English and Spanish, which is sent home after every fifth lesson. Through this ongoing communication, parents are informed of the topics and concepts 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 LEARNING OPPORTUNITIES

HMH® helps schools and districts achieve measurable gains with a person-to-person approach to professional learning centered on student outcomes. HMH’s blended professional learning model moves beyond the one-size-fits-all approach to include in-person and online consulting, courses, and coaching that are flexible, collaborative, and personalized to meet the needs of each district, school and classroom.

CONSULTING

As an extension of the educational team, HMH consultants provide needs assessments, strategic plans, technical services, and executive leadership support to ensure goals are met. HMH consultants will conduct a needs assessment, perform a proprietary inventory of instructional practices, collect baseline data, and deliver a customized plan. On an ongoing basis, the HMH team collaborates and strategizes plans for continued growth, offering guidance through best practices, and helps measure gains along the way to ensure sustained performance.

COURSES

Learning courses offered by HMH are data and evidence driven, goal-oriented, centered on students, and delivered by master educators. Teachers and leaders participate in courses to reinforce skills or refresh best practices. Program-specific courses ensure fidelity of implementation. Getting Started courses give teachers the know-how to maximize every instructional program. There are also follow-up courses to ensure smooth, sustainable implementation success. Additional courses will help educators with all levels of experience navigate assessments, analyze data, use reporting and digital tools to maximize instructional time.

COACHING

Professional coaches from HMH are available to help teachers and leaders integrate new skills and strategies for real impact. The expertise of the HMH team includes former and current teachers, coaches, administrators, district leaders, curriculum specialists, subject area experts, and ed tech leaders. HMH brings together influential thinkers and researchers, including leaders from the International Center for Leadership in Education® (ICLE) and Math Solutions®.

HMH’s Coaching Studio, a web and mobile-based platform, provides high-level, online opportunities for collaboration. Teachers and leaders will be empowered to make continued progress on goals, reflect on learning, and set objectives for the next in-person and/or online coaching session. Educators can also participate in professional learning conferences, webinars, social media, and more to share ideas and learn together.

HMH Blended Coaching connects the best of in-person, online, and anytime professional learning formats to provide teachers with a sustained process of a personalized coaching experience designed
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to improve the transfer of knowledge into classroom practice. Like all coaching at Houghton Mifflin Harcourt, our Blended Coaching approach is data-driven, partner-based, and student-centered, focused on the strategies and practices that will have the greatest impact on student achievement.

PROGRAM COMPONENTS

Do The Math is available in Small-Group (serves eight students) or Whole-Group Modules (serves twenty-four students).

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