

Everyday Mathematics

How Everyday Mathematics Offers a Better Approach to Mathematics Mastery

There's nothing fuzzy about it. *Everyday Mathematics* brings more clarity and rigor to math instruction, so students understand and appreciate the role of mathematics in daily life.

Everyday Mathematics, a comprehensive Pre-K-6 mathematics curriculum, not only embraces traditional goals of math education, but also sets out to accomplish two ambitious goals for the 21st century:

- To substantially raise expectations regarding the amount and range of math that students learn.
- To support teachers and students with the materials necessary to enable students to meet these higher expectations.

To provide more rigorous, balanced instruction, *Everyday Mathematics*:

- Emphasizes conceptual understanding while building mastery of basic skills.
- Explores a broad mathematics spectrum, not just basic arithmetic.
- Is based on how students learn and what they're interested in while preparing them for their future mathematical needs.

Changing the Way We Teach Math

The accelerating demand for competence and problem-solving agility in mathematics requires improved methods for teaching math in the classroom. Teachers are no longer preparing students for a lifetime of pencil-and-paper calculations, but for future careers that demand a true understanding of how mathematics works at much higher levels.

Everyday Mathematics is better than traditional, textbook-centered programs that produced generations of students who hated math. It is consistent with the ways students actually learn math – building understanding over time – first through informal exposure, then through more formal and directed instruction.

Content is taught in a repeated fashion, beginning with concrete experiences to which students can relate. Research shows that students learn best when new topics are presented at a brisk pace, with multiple exposures over time, and with frequent opportunities for review and practice. The sequence of instruction in the *Everyday Mathematics* curriculum has been carefully mapped out to optimize these conditions for learning and retaining knowledge.

Providing Rigorous, Balanced Mathematics Content

Beginning in Kindergarten, *Everyday Mathematics* introduces students to six major mathematical content strands that extend across all grade levels:

Number Sense

- Understanding the meaning, uses and representations of numbers
- Understanding the equivalent names for numbers
- Understanding common numerical relations

Operations and Computation

- Computing accurately
- Making reasonable estimates
- Understanding meanings of operations

Data Analysis

- Selecting and creating appropriate graphical representations of collected or given data
- Analyzing and interpreting data
- Understanding and applying basic concepts of probability

Measurement

- Understanding the systems and processes of measurement
- Using appropriate techniques, tools, units, and formulas in making measurements
- Using and understanding reference frames

Geometry

- Investigating the characteristics and properties of two- and three-dimensional geometric shapes
- Applying transformations and symmetry in geometric situations

Algebra

- Understanding patterns and functions
- Using algebraic notation to represent and analyze situations and structures

Everyday Mathematics structures this content into Program Goals and Grade Level Goals organized by strand and carefully articulated across the grades. This gives all students a balanced curriculum that is rich in real-world problem solving.

Students build and maintain basic math skills, including automatic math fact recall, while they develop higher-order and critical-thinking skills. The success of this approach, including its success in teaching computation, is evident in the students' improved scores on standardized tests.

Program Highlights

Everyday Mathematics' instructional design is innovative in many other ways:

- Problem solving based in everyday situations to build understanding.

- Developing readiness through hands-on activities.
- Sharing problem-solving methods and strategies to develop and reinforce conceptual understanding.
- Practice through games that allow frequent practice to master skills without tedium.
- Daily routines with Math Message and Mental Math and Reflexes to help students develop a sense of order.
- Informal assessments in small groups as well as Summative and Formative assessments built-in at the lesson and unit level.
- Suggestions and materials to involve families in the learning process in the Home Connections Handbook/Home Links.

Innovations That Create a More Successful Math Classroom

The differences between *Everyday Mathematics* and other programs affect classrooms in positive and productive ways. The daily routines and games are a necessary part of the classroom day, not just optional extensions. The routines and games allow students to build conceptual understanding and achieve mastery of basic skills in authentic and interesting contexts.

Everyday Mathematics is designed to allow teachers to do what they do best: teach. Because it is not centered on a student textbook, it gives teachers materials that allow them to provide their students with a rich variety of experiences so children actually enjoy math.

Every activity was developed specifically to help students acquire math skills. Language, social interaction, tools, and manipulatives play a key role in allowing this to happen. That's why *Everyday Mathematics* uses cooperative learning activities, Explorations, and Projects. The program takes special care to help teachers learn how to set up the classroom to accommodate effective group work and to support teachers as they work together.

At the same time, the program offers a comprehensive approach to the need for individualized attention through differentiated instruction. This gives teachers the support they need to establish a classroom where students from different learning backgrounds, styles, and pacing needs all master the math material.

In *Everyday Mathematics*, students use calculators to learn concepts, recognize patterns, develop estimation skills and explore problem solving, not to replace their knowledge of basic facts. The National Council of Teachers of Mathematics recommends the integration of calculators into mathematics programs for all grade levels to empower and motivate students to engage in richer problem-solving activities.

Assessments That Inform Instruction

Teachers can keep careful watch on their students' progress through assessments that are closely linked to instruction. While formal assessment is needed, *Everyday Mathematics* offers a balanced approach that includes less formal, ongoing assessment to give teachers a more complete picture of each student's progress.

The assessment tools are built into the program's design to give teachers feedback about student instructional needs and help in assigning grades.

A Successful Track Record

Districts from all over the country have reported strong evidence of improvement in student achievement. The program is now teaching its second generation of students.

Everyday Mathematics is the result of a rich collaboration between the University of Chicago School Mathematics Project author team, distinguished mathematicians, education specialists, teachers-in-residence, and hundreds of classroom teachers. Different from other programs, *Everyday Mathematics* was written over a period of 11 years, one grade level at a time, with each grade building on the achievement of the previous year. Each grade level curriculum was then field tested in its entirety in diverse classrooms nationwide for a full academic year.

Everyday Mathematics coincides with standards set by the National Council of Teachers of Mathematics and is used by more than 3 million students in 185,000 classrooms across the United States. To learn more about *Everyday Mathematics*, visit www.WrightGroup.com or call 1-800-382-7670.