

Frequently Asked Questions



Teacher Note: Cut and paste these questions into your newsletter or send one home along with appropriate student work.



Question: How will students practice and learn basic facts?

Answer: Students will learn and practice all of the basic facts in many different ways without having to complete an overwhelming number of drill pages. They will play mathematics games, work with Fact Triangles, and take part in short oral drills to review facts as a group. Students also use Addition/Subtraction and Multiplication/Division Fact Tables to practice facts and keep a record of the facts they have learned.



Question: Why are students using calculators? Will they become dependent on the calculator for solving problems?

Answer: In *Everyday Mathematics*, students use calculators to learn concepts, recognize patterns, develop estimation skills, and explore problem solving. They learn that a calculator can help them solve problems beyond their current paper-and-pencil capabilities; they also learn that, in some situations, they can use their own problem-solving abilities to get an answer more quickly than they can with a calculator. Students learn to use their basic facts and operations knowledge and estimation skills to decide whether the calculator's solution is reasonable. Students do not become dependent on calculators. Instead, they become comfortable and skillful users of a practical technological tool.



Question: How does *Everyday Mathematics* prepare students for standardized tests?

Answer: *Everyday Mathematics* prepares students for standardized tests through activities that strengthen the skills needed for success on these tests and familiarize them with the standardized test format. Students take timed tests and multiple-choice tests, play games that reinforce basic facts, frequently discuss and analyze problem-solving strategies, and learn ways to check the reasonableness of an answer. Throughout the program, students explain their thinking and reasoning in writing, which prepares them for the extended response questions that are becoming increasingly significant on state tests. And because the program distributes instruction among all the mathematics strands and continually revisits topics, students approach standardized tests without gaps in their basic knowledge.

Question: What is the purpose of Math Boxes? Why aren't the problems related?

Answer: Math Boxes are one way *Everyday Mathematics* provides students with continuous practice and review of *all* mathematical content. Almost every lesson includes a Math Box page in the *Math Journal* as part of the Ongoing Learning and Practice section of the lesson. The problems on a Math Box page provide practice in various skills and concepts learned up to that point. This way, students don't forget what they have learned, and they maintain and even improve their skills. Math Boxes are designed as independent activities, but at the beginning of the year, some guidance may be needed. Teachers often use Math Boxes to make informal assessments of students' progress.



Question: How will my child develop strong computation skills?

Answer: Students gain the fact knowledge they need for computation from basic facts practice, which consists of playing mathematical games, working with Fact Triangles, using fact tables, and taking part in short oral drills to review as a group. They develop an understanding of the need for computation, which operations to use, and how to use those operations by solving problems through number stories about real-life situations. They are given the opportunity to invent and use their own algorithms to solve problems, which they share and explain to their classmates. They also practice mental arithmetic and do activities that encourage rounding and estimating numbers mentally. All of these activities help students compute with accuracy and speed.



Question: Why do students play games during mathematics lessons?

Answer: *Everyday Mathematics* games reinforce concepts in a valuable and enjoyable way. They are designed to help students practice their basic facts and computation skills and develop increasingly sophisticated strategies. For example, some games give students experience using a calculator, while other games emphasize the relationship between the money system and place value. Games also lay the foundation for learning increasingly difficult concepts.

Students are often asked to play *Everyday Mathematics* games with family members as part of their home practice. As you learn to play the games yourself, you will begin to understand some of the ways games help students learn mathematics.

Question: Why does my child have to move on to the next lesson if he or she hasn't mastered skills in the current lesson?

Answer: *Everyday Mathematics* is based on the idea that mastery of mathematics concepts and skills comes with repeated exposure and practice, not after just one lesson. To help students develop mastery, mathematical topics are introduced in an informal way, and then presented numerous times in different contexts with gradually more formal, directed instruction. When students revisit topics, they make new connections and gain different insights. Students regularly review and practice new concepts through activities, games, and assignments. This gives them sufficient time to internalize and master the concepts and skills that are the designated goals for their specific grade level.



Question: Why does my child learn different algorithms to solve problems?

Answer: When students first begin learning about computation, they spend a lot of time experimenting with a variety of algorithms and sharing their own problem-solving methods. Instead of simply memorizing a set of prescribed algorithms, they learn to think, use common sense, and understand the purpose of algorithms. They are then required to demonstrate proficiency in one focus algorithm for each operation—addition, subtraction, multiplication, and division. Focus algorithms are powerful, relatively efficient, and usually easier to understand and learn than traditional algorithms. Once students have mastered the focus algorithm for each operation, they are free to use any method to solve problems.



Question: How will students with advanced math skills be challenged?

Answer: *Everyday Mathematics* is designed to move students beyond basic arithmetic and nurture their higher-order and critical-thinking skills. Many students who have mastered basic facts and certain methods of computation will be challenged to apply these skills to solving everyday, real-world programs. Because teachers use questions to stimulate thinking and drive discussions, mathematically gifted students are challenged to think flexibly, articulate their understandings, and explain problem-solving strategies to their classmates. In addition, because the program is activity-based and has many open-ended activities, teachers can easily make modifications to increase the level of challenge. Throughout the lessons, there are options for enrichment, extension, and game variations, all of which can provide challenge to highly capable students. Finally, the breadth and depth of mathematics covered in the program, along with its brisk pacing, often provide challenges for students eager to explore topics such as algebra or data and chance.

Question: My child has special needs. How does the program address learning differences?

Answer: *Everyday Mathematics* offers many opportunities for teachers to meet the varying needs of each student. The program is flexible—that is, it is possible to adjust or modify most activities according to student needs, and teachers may include additional activities for the purpose of fine-tuning a concept, providing extra practice, or helping a student with a particular learning style. Lessons involve many open-ended activities that allow students to succeed at their own skill levels. Students develop their particular strengths and improve their weak areas by playing games, inventing algorithms, writing numbers stories, and solving problems in *5-Minute Math* and Math Boxes exercises. Teachers may group students in order to tailor instruction or an activity to meet the group’s needs.



Question: How do you measure each student’s progress? How do you know what each student has learned?

Answer: *Everyday Mathematics* teachers assess understanding periodically and on an ongoing basis. Teachers frequently make notes of students’ progress while observing them working on Math Boxes or slate activities. Teachers also evaluate students’ responses to *5-Minute Math*, interactions during group work or games, and written responses to Math Messages. There are Progress Checks for each unit and Beginning-of-Year, Mid-Year, and End-of-Year assessments for evaluating individual student progress as well. Teachers maintain checklists to track each student’s progress toward achieving specific Grade Level Goals. These records are used to determine whether certain topics need review and whether particular students need additional help or challenge.



Question: How does *Everyday Mathematics* prepare students for middle and high school mathematics?

Answer: *Everyday Mathematics* is designed around the principle that students build upon their existing knowledge as they progress through the grades. It is also designed to teach students concepts and skills in all strands of mathematics, not just arithmetic, with an emphasis on understanding and flexibility of thinking over rote memorization. The program takes students through the stages of working with mathematics in a mostly concrete, pictorial way to working in a more abstract and symbolic way. This approach allows students to complete the elementary school program with solid basic skills in mental arithmetic, algorithms, and procedures. In addition, students have the ability to use these skills, along with their common sense, to solve complex problems and communicate their strategies and results. Students enter mathematics in the higher grades with a solid foundation in areas such as algebra and probability that have traditionally been left out of elementary school math programs.