Everyday Mathematics – Fourth Grade
Introduction

Everyday Mathematics is a program developed by the University of Chicago School Mathematics Project over the past twenty years. In developing this program, the authors and researchers studied national and international programs, and conducted extensive field-testing. They found that most children begin school with a broad intuitive background in mathematics often ignored by other programs. As a result of these studies, *Everyday Mathematics*, now in its Third Edition, adapted to match California Standards was developed based on the following principles:

- Teachers and other adults help students to work from their own experience to develop an understanding of mathematics and acquire knowledge and skills.
- The task of the curriculum is to make the gradual transitions from early intuition and concrete operations to abstractions and skills with symbols.
- Practical routines and games help build quick arithmetic skills.

IN *EVERYDAY MATHEMATICS* YOU CAN EXPECT…

- A problem solving approach based on everyday situations;
- Emphasis on conceptual understanding while building a mastery of basic skills;
- Key mathematical ideas repeated over time in slightly different ways;
- Carefully planned, sequential and balanced instruction;
- Learning through age-appropriate, playful activities;
- A broad range of mathematics topics exploring the full mathematics spectrum, not just basic arithmetic;
- Ongoing, continuous basic skills practice; and
- Opportunities to "do math" at home.

14	16
1,400%	half of 32
2 • 7	116 – 100
$\frac{1}{4}$ of 56	8 twos
20 – 6	(2 × 5) + 6
1 + 13	sixteen
700/50	10 less than 26
$3^2 - 13$	XVI
0.028 • 500	32 ÷ 2
XIV	4^2
(3 • 7) – 7	4 + 4 + 4 + 4

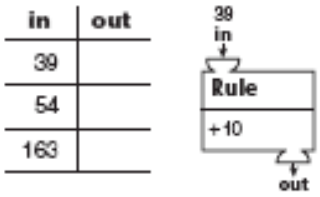
Number Collection Boxes

KEY COMPONENTS FOR FOURTH GRADE:

- **Student Math Journals**: With this program, students in grades 1-5 work in consumable journals. These journals are a student record of mathematical discoveries and experiences. It provides visual models for concept understanding and problems, and includes activities for individuals and small groups.
- **Student Reference Book:** Contains explanations of key mathematical content, along with directions for the *Everyday Mathematics* games. This hardbound book supports student learning in the classroom and at home. An online version of this reference book will be accessible to students and parents.
- **Mental Math & Reflexes:** At the beginning of each lesson, these short exercises are designed to strengthen students' number sense, review and advance essential skills, develop and solidify mathematical knowledge.

KEY COMPONENTS FOR FOURTH GRADE CONTINUED:

- **Math Message:** Lessons frequently begin with a Math Message, a brief, independent activity to be completed by students before the start of the core lesson. The Math Message might consist of *problems to solve, tasks to complete, or brief quizzes.* Most are used as lead-in activities for the lesson of the day, or as reviews of previously learned topics.
- **Study Links** provide activities intended to promote follow-up and enrichment activities at home. Study Links are designed to encourage students to take initiative and responsibility for completing assignments; help reinforce newly learned skills and concepts; and, relate what is learned in school to the students' lives outside of school, tying math to the real world.
- **Family Letters** will be sent home at the beginning of each unit. These help explain the unit's topics and terms. Referring to the family letter will help you reinforce how concepts are being taught in the classroom and will help you support your child in completing Study Links.
- **Math Boxes** are an important routine for reviewing and maintaining skills. The series of boxes in the students' journals provide review and practice of previously learned skills, exercises to support the day's lesson, and preview upcoming concepts.
- **Routines**: *Everyday Mathematics* routines are familiar, predictable activities that provide ongoing practice in a skill or content area. Some examples include **Number Collection Boxes** in which students practice number equivalency. **Fact Triangles** promote automaticity with fact families and the inverse operations of addition and subtraction, multiplication and division. **"What's My Rule?"** prepares students for working with algebra. It incorporates a diagram representing a function machine. In the example provided, students are given the rule, and their task is to complete the sum to fill in the "out" column of the function table.



"What's My Rule?" Function Diagram

- **Games** are used in the *Everyday Mathematics* program to reinforce the learning of basic skills. Frequent practice is necessary to attain mastery of a skill. However, drill can become tedious and as children lose interest it loses its effectiveness. Practice through games builds fact and operations skills and at the same time reinforces other skills. Many games allow variations so players may progress from easy to more challenging versions.
- **Online Resources:** Each student will receive a log in and password for www.everydaymathonline.com, where parents can access resources and information including online games.
- **District Math Website:** Please see http://pausd.org/parents/curriculum/elementary/Math/index.shtml for additional information.

HOW CAN I BE SURE THIS PROGRAM WILL WORK FOR MY CHILD?

The *Everyday Mathematics* program is based upon a spiral model of instruction. This means that rather than spend the first month on one concept, key concepts are integrated throughout the year. Students forget less material because it is constantly reinforced. Many of the problems are open-ended, allowing the student to work from the level in which he or she is most comfortable. For example, a question might ask the student to name **4** in three different ways. A student may answer 4 + 0, 2 x 2, and 2^2, whereas another student could answer 2 x 5 – 6, 100 ÷ 25, √16.

Ongoing assessment will include observation of students as they are involved in regular classroom activities and monitoring of student work. The aim is to gain insight into children's thinking and strategies, as well as their development in specific skills. Periodic assessments include a Progress Check at the end of each unit, as well as a mid-year and end-of-year assessment. In addition, teachers will conduct regular assessments to monitor basic facts fluency in the operations of addition, subtraction, multiplication and division. Teachers will share progress and observations with parents during conferences, and in district progress reports.