



Introduction to Third Grade Everyday Mathematics®

Welcome to *Third Grade Everyday Mathematics*. It is part of an elementary school mathematics curriculum developed by the University of Chicago School Mathematics Project. *Everyday Mathematics* offers children a broad background in mathematics.

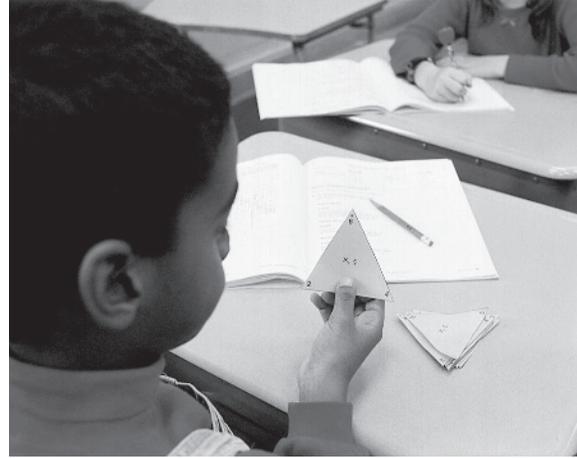
Several features of the program are described below to help familiarize you with the structure and expectations of *Everyday Mathematics*.

A problem-solving approach based on everyday situations By making connections between their own knowledge and their experiences, both in school and outside of school, children learn basic math skills in meaningful contexts so that the mathematics becomes real.

Frequent practice of basic skills Instead of practice presented in a single, tedious drill format, children practice basic skills in more engaging ways. In addition to completing daily review exercises covering a variety of topics, children work with patterns on a number grid, and solve addition and subtraction fact families in different formats. Children will also play games that are specifically designed to develop basic skills.

An instructional approach that revisits concepts regularly To enhance the development of basic skills and concepts, children regularly revisit concepts and repeatedly practice skills encountered earlier. The lessons are designed to build on previously learned concepts and skills throughout the year instead of treating them as isolated bits of knowledge.

A curriculum that explores mathematical content beyond basic arithmetic Mathematics standards around the world indicate that basic arithmetic skills are only the beginning of the mathematical knowledge children will need as they develop critical thinking skills. In addition to basic arithmetic, *Everyday Mathematics* develops concepts and skills in the following topics—number and numeration; operations and computation; data and chance; geometry; measurement and reference frames; and patterns, functions, and algebra.



Third Grade Everyday Mathematics emphasizes the following content:

Number and Numeration Counting patterns; place value; reading and writing whole numbers through 1,000,000; fractions, decimals, and integers

Operations and Computation Multiplication and division facts extended to multidigit problems; working with properties; operations with fractions and money

Data and Chance Collecting, organizing, and displaying data using tables, charts, and graphs; using basic probability terms

Geometry Exploring 2- and 3-dimensional shapes and other geometric concepts

Measurement Recording equivalent units of length; recognizing appropriate units of measure; finding the areas of rectangles by counting squares

Reference Frames Using multiplication arrays, coordinate grids, thermometers, clocks, calendars, and map scales

Patterns, Functions, and Algebra Finding patterns on the number grid; solving Frames-and-Arrows puzzles having two rules; completing variations of “What’s My Rule?” activities; exploring the relationship between multiplication and division; using parentheses in writing number models; naming missing parts of number models

Everyday Mathematics will provide you with ample opportunities to monitor your child’s progress and to participate in your child’s mathematics experiences.

Throughout the year, you will receive Family Letters to keep you informed of the mathematical content your child will be studying in each unit. Each letter will include a vocabulary list, suggested Do-Anytime Activities for you and your child, and an answer guide to selected Home Link (homework) activities.

You will enjoy seeing your child’s confidence and comprehension soar as he or she connects mathematics to everyday life. We look forward to an exciting year!

Routines, Review, and Assessment

The first purpose of Unit 1 is to establish routines that children will use throughout the school year. The second purpose is to review and extend mathematical concepts that were developed in previous grades.

In Unit 1, children will look for examples of numbers for the Numbers All Around Museum. Examples of numbers might include identification numbers, measures, money, telephone numbers, addresses, and codes. Children will also look at number patterns in a problem-solving setting by using number-grid puzzles and Frames-and-Arrows diagrams. (*See examples on the next page.*)

Throughout Unit 1, children will use numbers within the context of real-life situations. After reviewing place-value concepts, children will work with money and pretend to purchase items from a vending machine and a store. The emphasis on applying numbers to the real world is also reflected in the yearlong Length-of-Day Project, a weekly routine that involves collecting, recording, and graphing sunrise/sunset data.

Vocabulary

Important terms in Unit 1:

digits Any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 in the base-10 numeration system.

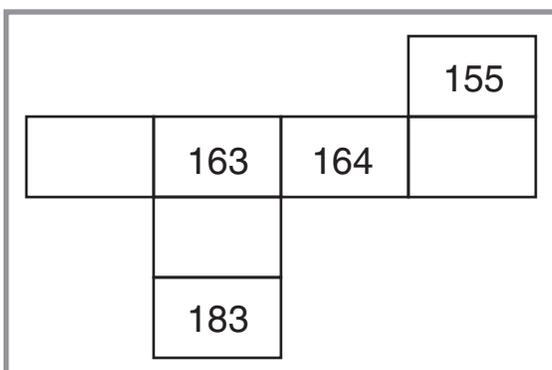
estimate An answer close to, or approximating, an exact answer.

tool kits In *Everyday Mathematics*, a bag or box containing a calculator, measuring tools, and manipulatives often used by students of the program.

number grid In *Everyday Mathematics*, a table in which consecutive numbers are arranged, usually in 10 columns per row. A move from one number to the next within a row is a change of 1; a move from one number to the next within a column is a change of 10.

									0
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

number-grid puzzle In *Everyday Mathematics*, a piece of the number grid in which some, but not all, of the numbers are missing. Children use number-grid puzzles to practice place-value concepts.

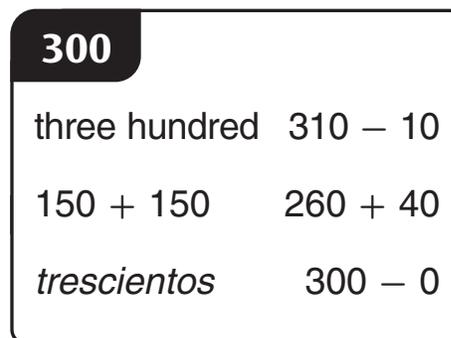


median The middle number in a set of data when the numbers are put in order from smallest to largest, or from largest to smallest. The median is also known as the *middle number* or *middle value*.

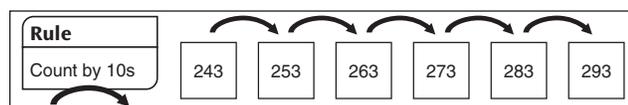
range The difference between the *maximum* and the *minimum* in a set of data. Used as a measure of the spread of data.

mode The value or values that occur most often in a set of data.

name-collection box In *Everyday Mathematics*, a diagram that is used for collecting equivalent names for a number.



Frames-and-Arrows In *Everyday Mathematics*, diagrams consisting of frames connected by arrows used to represent number sequences. Each frame contains a number and each arrow represents a rule that determines which number goes in the next frame. There may be more than one rule, represented by different colored arrows.



As You Help Your Child with Homework

As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through this unit's Home Links.

Home Link 1•1

1. Answers vary. 2. 7; 7; 7; 7

Home Link 1•2

1. 21; 41 2. 164; 166; 184; 186
3. Sample answers: 97; 98; 99; 100; 108; 119; 127;
128; 129; 130
4. 1,372; 1,383; 1,392; 1,393; 1,394

Home Link 1•3

Sample answers:

1. ②, 4 ~~7~~ 2. 2,567 3. 2,367 4. 899; 908; 910
5. 1,044; 1,055; 1,065 6. 9 7. 4 8. 9 9. 5

Home Link 1•4

1. Answers vary. 2. 8:00 3. 3:30 4. 6:15
5. 11:45 6. 7:10 7. 5:40 8. Answers vary.

Home Link 1•5

1.

Time Spent Watching TV	
Hours	Children
0	/
1	//
2	//
3	////
4	/
5	/

2. 0 3. 5 4. 5 5. 3 6. 3

Home Link 1•6

1. **18** Sample answers:

$9 + 9$	2×9
$6 + 6 + 6$	### ### ###
<i>dieciocho</i>	$4 \times 5 - 2$ $36 \div 2$
number of days in two weeks + 4 days	

2. **12** ~~###~~ one dozen

$7 + 5$	number of months in 1 year
$15 - 3$	$10 + 2$
18	9

3. Answers vary.

Home Link 1•7

Sample answers:

1. sure to happen 2. sure not to happen
3. may happen, but not sure
4. may happen, but not sure 5. 7 6. 3
7. 4 8. 7

Home Link 1•8

1.

131	¹³²	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	¹⁵⁰
151	152	153	¹⁵⁴	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	¹⁷⁷	178	179	180

2. 154; 23 3. 148; 29 4. 22
5. Sample answer: I counted 2 tens from 180 and then 2 ones. 6. 6 7. 7 8. 13 9. 13

Home Link 1•9

- 1., 2. Answers vary. 3. 3 4. 3 5. 5 6. 3

Home Link 1•10

5. 6; 6; 5; 10 6. 6; 5; 2; 8

Home Link 1•11

3. 4 4. 11 5. 4 6. 11

Home Link 1•12

1. Rule: +3¢

12¢	15¢	18¢	21¢	24¢	27¢
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2. Rule: -100

1,000	900	800	700	600	500
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3. Rule: +6

24	30	36	42	48	54
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4. 1.46 5. 0.87 6. 12.06
7. Sample answers: 3ⓐ1ⓓ4ⓑ; 2ⓐ3ⓓ1ⓓ4ⓑ

Home Link 1•13

4. 4 5. 4 6. 7 7. 7

Numbers All Around Museum



Family In the *Third Grade Everyday Mathematics* program, children *do* mathematics.

Note

We expect that children will want to share their enthusiasm for the mathematics activities they do in school with members of their families. Your child will bring home assignments and activities to do as homework throughout the year. These assignments, called Home Links, will be identified by the symbol at the top of the page. The assignments will not take very much time to complete, but most of them involve interaction with an adult or an older child.

There are good reasons for including Home Links in the third grade program:

- ◆ The assignments encourage children to take initiative and responsibility for completing them. As you respond with encouragement and assistance, you help your child build independence and self-confidence.
- ◆ Home Links reinforce newly learned skills and concepts. They provide thinking and practice time at each child's own pace.
- ◆ These assignments are often designed to relate what is done in school to children's lives outside school. This helps tie mathematics to the real world, which is very important in the *Everyday Mathematics* program.
- ◆ The Home Links assignments will give you a better idea of the mathematics your child is learning in school.

Generally, you can help by listening and responding to your child's requests and comments about mathematics. You can help by linking numbers to real life, pointing out ways in which you use numbers (time, TV channels, page numbers, telephone numbers, bus routes, and so on). Extending the notion that "children who are read to, read," *Everyday Mathematics* supports the belief that children who have someone do math with them will learn mathematics. Playful counting and thinking games are very helpful in promoting such learning.

The Family Note will explain what the children are learning in class. Use it to help you understand where the assignment fits into your child's learning.

HOME LINK
1•1

Numbers All Around Museum *continued*



Family Note Numbers on advertisements show quantities and prices (3 cans of soup for \$1.00); food containers show weight or capacity (a $15\frac{1}{2}$ -oz can of black beans or 1-quart carton of milk); and telephone books show addresses and phone numbers. By helping your child find examples of numbers in everyday life, you will reinforce the idea that numbers are all around us and are used for many reasons. Help your child recognize numbers by filling in the table.

Please return this Home Link to school within the next few days.

- Find as many different kinds of numbers as you can. Record the numbers in the table below. Be sure to include the unit if there is one.

Number	Unit (if there is one)	Where you found the number
14	oz	cereal box

Find objects or pictures with numbers on them to bring to school. Check with an adult at home first. Do not bring anything valuable.

Practice

- Solve.

$$\begin{array}{r} 5 \\ +2 \\ \hline \square \end{array}$$

$$\begin{array}{r} \square \\ -2 \\ \hline 5 \end{array}$$

$$\begin{array}{r} \square \\ -5 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 2 \\ +5 \\ \hline \square \end{array}$$