

Introducing *First Grade Everyday Mathematics*

Welcome to *First Grade Everyday Mathematics*. This program is a part of an elementary school mathematics curriculum developed by the University of Chicago School Mathematics Project.

Here are some features of the *First Grade Everyday Mathematics* program:

Children learn basic skills by solving problems based on everyday situations. They connect their own knowledge to their experiences both within and outside of school. Through these meaningful situations, children learn basic skills as mathematics becomes “real.”

Children practice basic skills in a variety of engaging ways. They complete daily practice covering a variety of topics, find patterns on the number line, work with addition and subtraction facts, and play games that are designed to develop basic skills.

Children revisit concepts over the course of the year. To improve the development of basic skills and concepts, children regularly revisit concepts and repeatedly practice skills that have been taught earlier. The lessons are designed to build on concepts and skills throughout the year instead of treating topics in isolated sections.



First Grade Everyday Mathematics emphasizes the following topics:

- **Operations and Algebraic Thinking**

Representing and solving problems involving addition and subtraction; understanding and applying properties of operations and the relationship between addition and subtraction to these problems; adding and subtracting within 20; and working with addition and subtraction equations

- **Number and Operation in Base Ten**

Extending the counting sequence; understanding place value; and using place-value understandings and properties of operations to add and subtract within 100

- **Measurement and Data**

Measuring lengths; telling and writing time; and representing and interpreting data

- **Geometry**

Reasoning with shapes and their features

You will be provided with many 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.

Enjoy seeing your child's understanding of math grow as he or she connects mathematics to everyday life.

We look forward to an exciting year!

Counting

You will receive a Family Letter before each unit begins. Each letter introduces you to the content of the next unit, in this case, counting. The letter also includes vocabulary terms, activities you can do at home, descriptions of math games, and answers to the Home Links, or homework.

Unit 1 builds on what children learned about numbers in Kindergarten. In this unit, they review and practice counting. Children practice *rote counting*, or reciting numbers in order by 1s, 5s, and 10s. Children also practice *rational counting*, or counting collections of actual objects. After some experience, they begin to associate counting “1 more” or “1 less” with addition and subtraction. Children also use their counting skills to collect and record data using tally charts.

Number stories are also introduced in Unit 1. *Number story* is another name for what is sometimes called a “story problem” or a “word problem.” Throughout *Everyday Mathematics*, number stories provide opportunities for children to use a variety of strategies to solve problems. Children are encouraged to talk through solving the number stories. Not only do they have many opportunities to solve number stories throughout first grade, but they are also asked to make up their own number stories.

Unit 1 introduces some of the tools used in *Everyday Mathematics*, such as pennies, dice, the Pattern-Block Template, pattern blocks, base-10 blocks, and the geoboard. Children also learn to navigate the number grid and use it to count by 1s and 10s.

Vocabulary These are important terms your child learns in Unit 1. Listen to your child use these terms when talking about mathematics at home.

number grid A table in which numbers are arranged in order, usually 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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

number line A line with numbers that are marked in order.



number story A story that involves numbers and one or more questions. For example, *I have 7 crayons. Carrie gave me 5 more crayons. How many crayons do I have now?*

tally chart A chart that uses tally marks to track values in a set of data.

Number of Pull-Ups	Number of Children
0	###
1	###
2	
3	

tally mark A mark used in a count. Tally marks let children represent numbers they can count and say, but may not be able to write yet.

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toolkit Individual bags or boxes used in the classroom; they usually contain a variety of items—such as calculators, measuring tools, and manipulatives—which help children understand mathematical ideas.

Do-Anytime Activities

To work with your child on concepts taught in this unit, try these activities:

- Discuss examples of mathematics in everyday life: TV listings, road signs, recipe measurements, time, and so on.
- Count orally by 5s and 10s when doing chores or riding in the car or on a bus. Occasionally count down, or back; for example: 90, 80, 70, 60, and so on.
- Count numbers of objects around the house and while shopping. Have your child keep track using tally marks. For example, count the number of canned goods bought at the grocery store.

Building Skills through Games

Your child will play these games and others in Unit 1:

Bunny Hop

Players roll a die to navigate on a number line to 20 and back to 0.

Monster Squeeze

The leader chooses a mystery number on a number line. Other players try to guess the number using clues from the leader.

Penny-Dice

Players take turns rolling a die and taking the number of pennies indicated on the die. The first player to get 20 pennies wins.

Rolling for 50

Players roll a die to navigate on the number grid. The first player to reach FINISH wins.

Top-It

Each player turns over a number card from a deck. Whoever has the higher number keeps both cards. Whoever has more cards when the whole deck has been used wins.

As You Help Your Child with Homework

Your child will bring home assignments called “Home Links.” Home Links are suggested follow-up or enrichment activities to be done at home. They will not take much time to complete, but may involve interaction with an adult or an older child. Each Home Link activity is identified by the following symbol:



As your child brings home assignments, you may wish to go over the instructions together. The answers listed below will guide you through the Home Links for Unit 1.

Home Link 1-7

1. Your child should attach pictures of numbers as they appear in everyday life.

Home Link 1-8

1. Answers vary.
2. 1; 2; 4; 6; 8; 9

Home Link 1-9

1. Your child may mention pattern blocks, base-10 blocks, or geoboards.
2. 7

Home Link 1-10

1. Sample number story: There are 5 flowers in the garden. If I pick 1 of them to give to my teacher, how many flowers will be left?
Answer: 4 flowers

NOTE: Encourage your child to come up with his or her own way to solve the problem, whether it's drawing pictures or counting on fingers. As an adult you know that $5 - 1 = 4$, but it is more natural for your child to come up with his or her own strategy than to think of the number story as $5 - 1 = 4$.

Your child should attach the picture used for the number story to the page if he or she didn't already draw it.

2. 4, 7, 11

Home Link 1-11

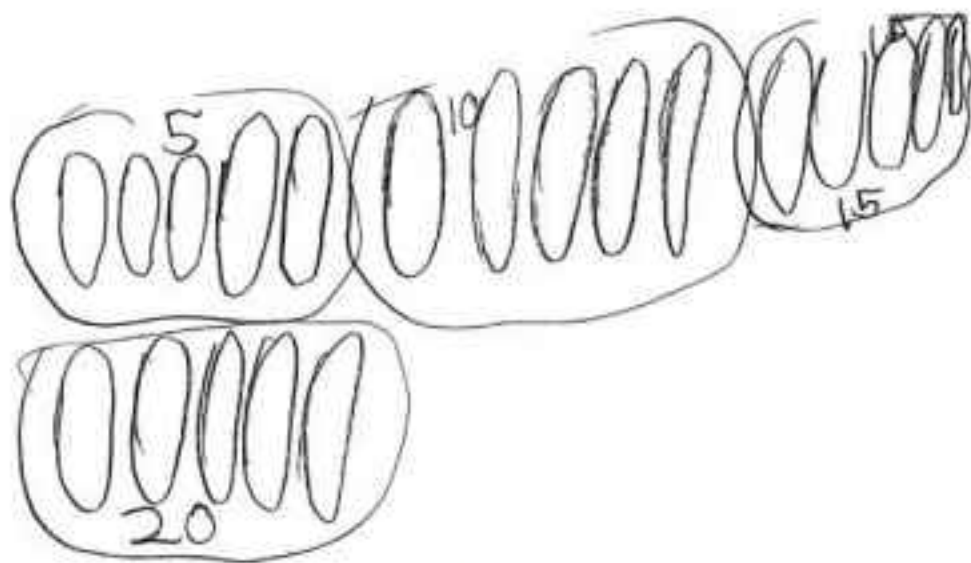
1. Check that your child can count by 1s to the number he or she wrote.
2. Sample answer: 50, 40, 30, 20, 10, 0
3. Sample answer: I can count squares from left to right as I count by 1s. To count by 10s, I can start at the top right corner and move down.
4. 15; 20; 25; 35; 40; 50

Open Response and Reengagement Lessons

A two-day lesson in each unit of *First Grade Everyday Mathematics* is an Open Response and Reengagement lesson. In these lessons, children solve interesting problems using their own strategies and reasoning. On Day 1, children solve an open response problem—a problem with more than one possible strategy or solution. On Day 2, the class discusses children's work from Day 1 to "reengage" with the problem and learn more about the mathematics involved. Children then revise their work based on what they learn from the discussion.

These lessons are not assessments, but opportunities for children to solve approachable problems that require persistence. Children's work on Day 1 reveals both strengths and weaknesses, allowing the second day's discussion to focus on areas that need improvement. From these discussions, children find that learning from mistakes is a natural part of mathematical problem solving. Explaining their thinking and listening to the explanations of others builds children's confidence while allowing them to see that there is more than one way to solve a problem. This promotes creative thinking about solutions later on. Having an opportunity to revise their work helps children realize that they can be successful tackling hard tasks if they think about them and keep trying.

The open response problem in this unit asks children to count a group of objects and choose strategies, such as grouping by 2s or 5s, to ensure that they count accurately and efficiently.



Drawing of child's strategy for counting by 5s

These lessons continue work on problem solving that is central to *Everyday Mathematics* across all the grades. Ask your child to talk to you about the problems and his or her mathematical thinking throughout the year. Enjoy seeing your child become a confident problem solver!