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# Introduction

## Welcome to *First Grade Math with Confidence*!

*First Grade Math with Confidence* is a complete first-grade math curriculum that will give your child a solid foundation in math. It's **playful, hands-on, and fun** with thorough coverage of all the skills your child needs to become capable and confident at math:

- reading, writing, and comparing numbers to 100
- understanding place value in numbers to 100
- mastery of the addition and subtraction facts to 20
- solving addition and subtraction word problems
- reading bar graphs, measuring length, and identifying shapes
- counting money and telling time to the half hour

The carefully-sequenced and confidence-building lessons will help your child develop a strong understanding of math, step by step. Daily review will ensure she fully masters what she has learned in previous lessons. With this blend of **deep conceptual understanding** and **traditional skill practice**, you'll give your child a thorough first-grade math education.

Fun activities like Addition Bingo, Pretend Store, Measurement Scavenger Hunt will help your child develop a **positive attitude** toward math. You'll also find optional weekly enrichment lessons, with suggestions for delightful math picture books and real-world math activities that will help your child appreciate the importance of math in real life.

Besides this Instructor Guide, *First Grade Math with Confidence* also includes a **colorful, engaging Student Workbook** to reinforce what your child has learned. These short, straightforward workbook pages both reinforce new skills and review previous lessons so that your child remembers what he's learned.

If you're like most parents, you've probably never taught math before. You may even feel a little anxious or intimidated. But don't worry: if you can add  $9 + 8$  and count to 100, I promise you'll be fine! *First Grade Math with Confidence* is full of features that will help you teach math with confidence all year long:

- **Scripted, open-and-go lessons** guide you every step of the way
- **Clear goals** at the beginning of each lesson so you know exactly what you're trying to accomplish
- **Explanatory notes** help you understand more deeply how children learn math so you feel well-equipped to teach your child
- **Checkpoints** at the end of each unit give you specific guidance on whether to spend more time on the current unit or move on to the next one

In the next section, you'll learn how the program is organized and how to get your materials ready. Invest a little time reading this section now (and getting your Math Kit ready), and you'll be ready to teach math like a pro all year long.

Wishing you a joyful year of first grade math!

Kate Snow

# How to Use This Book

## The Goals of *First Grade Math with Confidence*

*First Grade Math with Confidence* aims to help children become capable and confident math students, with a deep understanding of math concepts, proficiency and fluency with fundamental skills, and a positive attitude toward math.

### Deep conceptual understanding

You'll focus on one concept at a time for several weeks so your child can build deep, connected knowledge of each new topic. (Educators call this a *mastery approach* to new content.) Each new lesson builds on the previous one so your child gradually develops thorough understanding and makes connections between concepts.

### Proficiency with fundamental skills

Children need lots of practice in order to master the basic skills necessary for proficiency in math. *First Grade Math with Confidence* provides continual, ongoing review of these core skills so your child fully grasps them by the end of the year. (Educators call this a *spiral approach* to review, because children periodically revisit topics, just as the curve of a spiral returns to the same point on a circle.)

### Positive attitude

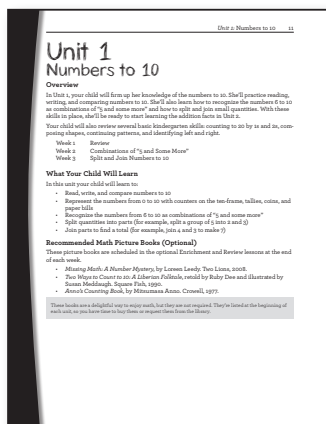
The lessons in *First Grade Math with Confidence* include games, movement, pretend activities, and lots of hands-on learning so your child enjoys and even looks forward to math time. Optional enrichment lessons each week (with a picture book and math extension activity) provide a break from the usual routine and help your child appreciate how math is used in real life.

## Overview

*First Grade Math with Confidence* is organized into units, weeks, and lessons. Each section has clear goals so you know exactly what you're trying to accomplish.

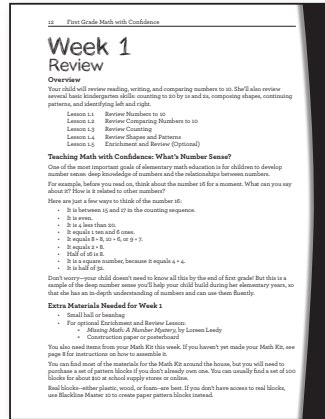
## Units

*First Grade Math with Confidence* is divided into 11 units. Each unit focuses on developing thorough understanding of one core topic, such as addition, measuring length, or place value.



## Weeks

Each unit is divided into 2–4 weeks (with a total of 32 weeks of lessons). Each week focuses on a specific topic, such as bar graphs or measuring in inches. These groups of lessons are called weeks, but you don't have to finish each one in a calendar week—it's fine to have your “week” begin on Wednesday and end on the following Friday.



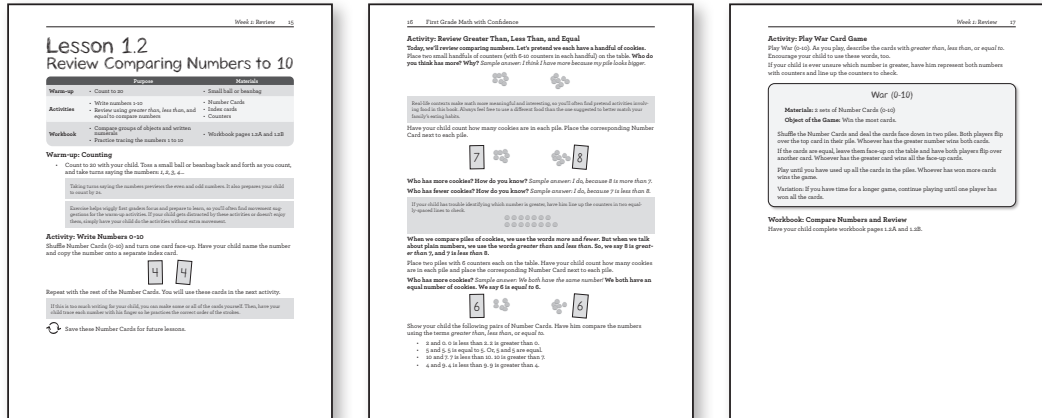
The preview for each week includes the following:

- **Overview.** A brief summary of what you'll teach your child that week, along with a list of the lessons.
- **Teaching Math with Confidence.** These notes will help you understand more deeply how children learn math so that you're well-prepared and confident as you teach your child the new concepts.
- **Extra Materials.** You'll sometimes need to supplement your regular math materials with a few everyday household items, such as small toys, tape, or scissors. This section will give you a heads-up if you need any extra materials for the week. (See below for more information on materials.)

## Two Types of Lessons

Each week includes five lessons: four required core lessons and one optional enrichment lesson. The core lessons teach and review essential first-grade concepts and skills, while the enrichment lessons provide extra fun and real-life math applications.

Both types of lessons follow a consistent three-part format, with the purpose and materials listed at the top for easy reference. Plan to spend 20-25 minutes on each lesson.



Within the lessons:

- **Bold** text indicates what you are to say.
- *Italic* text provides sample answers.
- Gray-highlighted text indicates explanatory notes.

If possible, try to plan a consistent time for teaching math each day. Many families find it best to do math first thing in the morning when everyone's fresh. If you have younger children, you might find it works better to teach math in the afternoon while your younger children are napping.

## Core Lessons (Required)

Each core lesson includes several short and varied activities to help your child stay engaged and attentive.

### Warm-up: counting, memory work, and review (3-5 minutes)

The warm-up provides regular, brief practice with counting and memory work. It also includes a quick review activity so your child remembers and retains what he has learned. Try to keep this part of the lessons short and sweet so your child isn't worn out before the new learning later in the lesson.

You'll find a full list of the memory work your child will memorize this year on 499.

The lessons include regular review to help your child gradually master this list over the course of the year, but feel free to adjust as needed to better fit your child. If your child already knows a particular fact, you do not need to review it every time it is listed in the instructor's guide. Or, if your child needs more practice than suggested, feel free to add it.

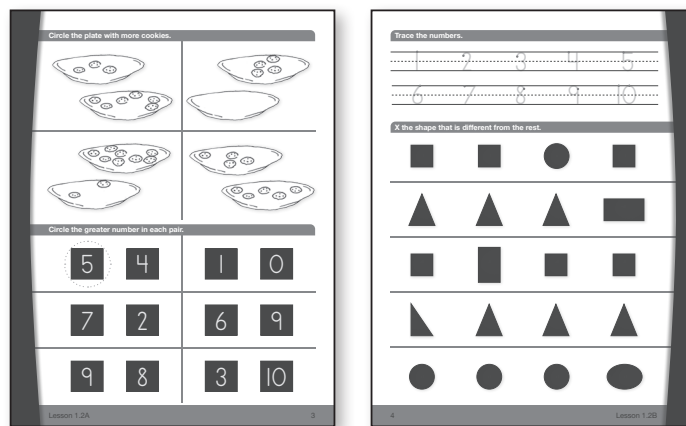
### Hands-on activities (10-15 minutes)

These parent-directed activities are the most important part of each lesson. You'll teach your child the new concepts and skills through conversation, hands-on materials, and games. The lessons are scripted so you can just open the book and start reading, but you're welcome to rephrase the words to fit your own teaching style better.

Feel free to inject your own personality into your teaching, and personalize the lessons for your child. You might use your child's favorite objects for counting, change the names in word problems to match your family members, or take your math lesson outside to enjoy a beautiful day.

### Workbook (5-10 minutes)

Your child will complete a two-sided workbook page at the end of each core lesson. (These workbook pages are included in the separate Student Workbook.) Side A gives your child written practice with the lesson's new material. Side B reviews skills your child has already learned. Most first-graders will be able to complete the worksheets independently, but many will need their parent to help read and interpret the directions. If writing is difficult for your child, feel free to have your child complete part or all of the worksheets orally rather than writing out the answers.



Have your child use a pencil for the workbook pages so it's easy to erase mistakes. You'll also occasionally need crayons or markers for coloring activities, so make sure you have them available. And, try to check the workbook pages as soon as your child finishes them. This immediate feedback shows your child that you value his work, and it helps prevent mistakes from becoming ingrained habits.

### Enrichment Lessons (Optional)

The enrichment lessons are scheduled on the fifth day of each week. Many parents and children find that these enrichment lessons are their favorite part of the week. (Siblings often enjoy participating in them, too!) However, these enrichment lessons are completely optional. You are free to choose the ones that sound the most fun for your family, or skip them entirely if your schedule is too full.

#### Warm-up: counting, memory work, and review (3-5 minutes)

The enrichment lessons give your child a chance to show off her counting skills and recite all of the memory work she has learned so far. If you have time, you can also revisit one of her favorite or most challenging activities from the week.

#### Picture book (10 minutes)

Reading math picture books together is a fun, cozy, and delightful way to enjoy math. Most of the suggested books relate to the main concept studied that week, but some expose your child to other interesting math topics. **These picture books are not required.** You do not need to buy every book or track down every book in your library system.

## Enrichment activity (varies)

The enrichment activities help your child understand and appreciate how math is used in everyday life. You'll find suggestions for art projects, field trips, physical activities, and more to make math come alive for your child.

## Pacing and Checkpoints

Just as children learn to crawl, walk, and talk at different times, they are developmentally ready to learn math at different times, too. *First Grade Math with Confidence* provides lots of flexibility so your child can learn at his own pace. You know your child best, and you are always welcome to slow down or speed up the pace of the lessons based on your child's needs. Use the information below to help make decisions about pacing.

### Is My Child Ready to Start *First Grade Math with Confidence*?

Most children are ready to start *First Grade Math with Confidence* when they are 6 years old. Your child is ready to begin this program if she can:

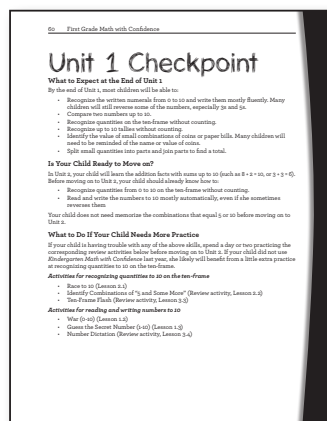
- Count to at least 10 (preferably higher).
- Write the numbers from 1 to 10. (It's fine if they're crooked or she sometimes reverses some of them.)
- Identify basic shapes, such as circle, triangle, and square.
- Solve simple addition or subtraction word problems by acting them out with concrete objects.

If your child did not complete *Kindergarten Math with Confidence*, you may find you need to spend a little extra time on building number sense with the numbers from 0 to 10 in Unit 1. The Checkpoint at the end of Unit 1 will help you decide whether to continue on to Unit 2 or spend more time solidifying these core number concepts. (See the next question for more on Checkpoints.)

### How Do I Know Whether to Stick with a Lesson or Move On?

Most children need lots of exposure to a new concept or skill before they fully grasp it. Each lesson in *First Grade Math with Confidence* gently builds on the previous one, but your child doesn't need to completely master every lesson before moving on to the next. The program includes many opportunities for review and practice before your child is expected to achieve full proficiency with any topic.

As a general principle, continue teaching new lessons until you reach the end of a unit. At the end of each unit, you'll find a Checkpoint that will help you assess how your child is doing. The Checkpoints will also give you guidance on whether to move on to the next unit or give your child more practice with the current unit.





Each Checkpoint is divided into 3 parts:

- **What to Expect at the End of the Unit** This list of skills tells you what first graders typically are able to do at the end of each unit.
- **Is Your Child Ready to Move On?** This section tells you what your child needs to have mastered before moving on to the next unit.
- **What to Do if Your Child Needs More Practice** If your child isn't quite ready to move on, this section gives you options for reviewing and practicing the skills your child needs to master before the next unit. (This section is omitted if no specific skills are necessary for the next unit.)

For many units, your child does not need to master all of the material from the current unit before moving on. For example, in Unit 2, your child will learn the addition facts up to 10. But, he does not need to master the addition facts before studying shapes in Unit 3. Instead, he'll continue to practice the addition facts throughout Unit 3. That way, he'll be ready to build on them as he begins subtraction in Unit 4.

### **What Should I Do If My Child is Crying or Frustrated?**

Extra tiredness, oncoming illness, or just plain grumpiness can make for a less-than-cheerful day of math (for both kids and parents). Don't worry if your child occasionally gets frustrated or cries during lesson time. If emotions rise during math, it's usually best to cut the lesson short and resume later in the day or the next day.

However, if your child is continually frustrated, resisting math lessons, or crying during math time, it's a clear sign you should take a break from the current topic, do some easy review, and then try the topic again in a few weeks. If your child shows these signs frequently, this book may be too challenging for his current maturity level, no matter how old he is. It may be wiser to use *Kindergarten Math with Confidence* instead. Every child's brain matures at a different rate, and you and your child will both find math time much more enjoyable when your child is developmentally ready for the book.

### **What Should I Do If the Lessons are Taking Too Long?**

Most first-graders have a short attention span. The lessons in this program are meant to take no more than 20-25 minutes and include a variety of activities so your child can stay engaged and attentive. If you find a particular lesson takes longer than 25 minutes or if your child gets restless, stop and resume the lesson the next day. Or, break the lesson into two parts: do the hands-on activities during one part of the day, and then have your child do the workbook page at a different time. The rest of the lesson will probably go much more smoothly once your child is fresh.

### **What Should I Do If My Child Flies Through the Lessons?**

The Unit 1 lessons are especially short as children build their attention spans and confidence during the first few weeks of the program. If you used *Kindergarten Math with Confidence*, many of the Week 1 activities may feel very familiar. Feel free to condense lessons or teach two per day if your child whizzes through the activities.

After Unit 1, the lessons become a bit longer. If you have a child who picks up math quickly, you can condense lessons or skip some of the warm-up activities or review workbook pages. If you go this route, occasionally double-check whether your child still remembers these skills. Just because she knew a skill at one point doesn't mean she still knows it, and periodic checks will help cement that information in her memory.

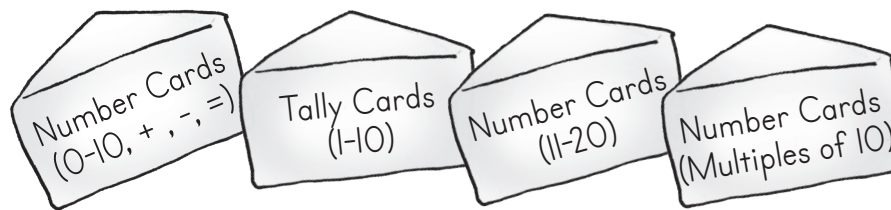
## What You'll Need

You'll use simple household items to make math hands-on, concrete, and fun in *First Grade Math with Confidence*. Most lessons will only require materials from your Math Kit, but you'll also sometimes use everyday objects to enhance the lessons. No need for an expensive shopping trip, though! You likely already own just about everything you need.

### How to Create Your Math Kit

You'll use materials from your Math Kit in every core lesson. Stick the following materials in a box or basket so that they're always ready to go, and keep them handy when you're teaching.

- **125 small counters.** Any type of small object (such as plastic tiles, Legos, blocks, plastic bears, coins, or dried beans) is fine. These work best (and fit the Blackline Masters) if they are less than .75" (or 2 cm) across. You'll occasionally need 2 colors, so make sure at least 10 of the counters are a different color than the rest.
- **Pattern blocks.** Pattern blocks are a specific set of small plastic or wooden hexagons, triangles, squares, trapezoids, and diamonds. They're generally available for about \$10 online or at school supply stores. Children typically love pattern blocks and enjoy making designs from them. If you don't have access to real pattern blocks, you can photocopy and color Blackline Master 10 (page 549) instead.
- **Coins (20 pennies, 20 nickels, 10 dimes, 4 quarters).** You can use toy coins, but children often enjoy using real coins more. If you live outside the U.S., use your local currency or the generic coins on Blackline Master 11 instead. See page 28 for more details on your options.
- **Play money (10 one-dollar bills, 10 five-dollar bills, and 10 ten-dollar bills).** Play money from a toy cash register or board game works well, or you can copy and cut out the play money on Blackline Master 12.
- **2 packs of 100 blank index cards.** You'll use index cards for many different activities, such as making Number Cards for creating equations and playing games. Three-inch by five-inch blank cards are ideal, but anything similar will work. You'll have quite a few cards by the end of the year, so label 4 envelopes or zip-top bags now to make organizing the cards easier.



- **2 packs of playing cards and 2 dice.** You'll use playing cards and dice for some of the games in the book. Any standard 52-card decks and regular, six-sided dice will work fine.
- **Clock with hands.** Your clock should have clear, easy-to-read numbers, tick marks along the edge for each minute, and hands your child can easily move. If your family's clocks don't meet these criteria, you may want to buy an inexpensive plastic teaching clock (sometimes called a "Judy clock") to make these lessons easier to teach.
- **1-foot ruler.** Any type of ruler is fine, as long as it's labeled in inches. (If your family uses the metric system, you'll need a 30-centimeter ruler, labeled in centimeters, instead.)
- **Blank paper.** Any kind of paper is fine, including plain copy paper.
- **Pencils.** Keep sharp pencils on hand for lessons and workbook pages.

- **Binder with about 20 plastic page protectors. (Recommended, but not required.)** Blackline Masters and game boards are an important part of the program and are often re-used. Many pilot-test families found it easiest to keep track of these papers in plastic page protectors in a binder.



You will occasionally need to save items for future lessons. This symbol will alert you if you need to save anything.

### Other Supplies Needed

You'll only need your Math Kit for most lessons, but occasionally you'll need a few other common household items. You'll find these items listed in three different places so you always know what you need:

- The preview for each week lists all extra household items needed.
- The top of each lesson lists all supplies you'll need to teach that lesson. These lists include items from your Math Kit as well as extra household items. (Note that nearly every lesson requires paper and pencils. To save space, they are not listed every time.)
- You'll find the complete list of household items needed throughout the year on page 504.

Don't feel you have to gather these extra household items now. Most are common things like tape, scissors, or small toys you can grab right before you begin the lesson.

### Helpful Resources

You'll find an appendix of helpful resources at the back of this book:

- Scope and Sequence
- Complete Memory Work List
- Complete Picture Book List
- Materials List
- Game List (and extra copies of game boards)
- Blackline Masters